

DEPARTMENT OF BOATING AND WATERWAYS



REPORT TO THE  
STATE WATER RESOURCES CONTROL BOARD

RECOMMENDATIONS FOR VESSEL WASTE DISPOSAL  
FACILITIES FOR REGION 2 MARINAS AND HARBORS,  
EXCLUDING TOMALES BAY

SWRCB INTERAGENCY AGREEMENT #02-194-250-0,

**August 2, 2004**

**FINAL  
REPORT**

The contents and recommendations contained in this report do not necessarily reflect the views and policies of the State Water Resources Control Board (SWRCB) or the Regional Water Quality Control Board (RWQCB), nor are the recommendations binding on the SWRCB or RWQCB."

# **Report and Recommendations for Vessel Waste Disposal Facilities for Region 2 Marinas and Harbors, Excluding Tomales Bay**

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Contract #00-107-744, Amendment 3**

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## **INTRODUCTION**

Fecal contamination from the improper disposal of human waste by boaters can result in human health hazards, beach closures, shellfish contamination, and loss of recreational opportunities. Sewage discharged from boats also introduces an oxygen demand which reduces the health of the aquatic environment. Further, it stimulates algae growth which can reduce the available oxygen needed by fish and other organisms. In California, the need for protecting the waters in Region 2 has increased significance since the San Francisco Bay-Delta Estuary was added in 1987 to the National Estuary Program, which designates the system as an estuary of national significance. In addition, the majority of the coastal waters in Region 2 are a part of the National Marine Sanctuary Program. Tomales Bay is part of the Gulf of the Farallones National Marine Sanctuary, which was designated 1981; and Half Moon Bay is part of the Monterey Bay National Marine Sanctuary, which was designated in 1992. This report will address the marinas all of the areas in Region 2, with the exception of Tomales Bay, which will be addressed in a separate report.

Several water bodies in Region 2 are listed as impaired by high coliform count on the Clean Water Act's (CWA's) 303(d) list. The water bodies that are listed include Richardson Bay, Marina Lagoon, San Gregorio Creek, San Pedro Creek, and San Vicente Creek. In addition, several areas in the Pacific Ocean are listed as impaired. The potential sources cited in most cases include urban runoff, storm sewers and nonpoint sources. Richardson Bay is the only area which directly cites boat discharges, vessel wastes and sewage disposal. This is primarily because coliform counts have not been conducted in many parts of Region 2, and the pollution source is not directly known. The SF Bay Keeper has recently received funds to quantify fecal contamination linked to marinas in Region 2. Although this study has not been completed yet, considering the high number of permanent slips and live-aboards that are present in Region 2 waters, it is clear that fecal contamination from boaters poses a potential problem if not disposed of properly.

The Code of Federal Regulations (Title 33, Part 159) states that all boats with installed toilets must have a U.S. Coast Guard certified marine sanitation device (MSD). There are three types of MSD's: Types I & II treat and discharge the sewage, while Type III devices store the waste until it can be properly discharged at an onshore pumpout station or mobile pumpout unit. Some vessels with Type I & II MSD's also have the ability to discharge their sewage at a pumpout unit.

The Clean Water Act of 1992 (CWA) makes it illegal to discharge untreated vessel sewage in all navigable U.S. waters. In addition, under Section 312 of CWA, it is illegal to discharge treated waste into designated "No-Discharge Areas." Marin County's Richardson Bay is the only No-Discharge Area in Region 2. Richardson Bay was designated as a No-Discharge Area as a result of recommendations in the Richardson Bay Special Area Plan, adopted in 1984. This recommendation was made due to the large number of anchor-outs and live-aboards in the region and the finding that some of the authorized houseboats and live-aboards, as well as most of the unauthorized houseboats and live-aboards, did not have U.S. Coast Guard approved MSDs, and were not connected to an approved sewage and graywater treatment system. Water quality sampling by the Regional Board confirmed that both sewage and graywater discharged from vessels or floating structures in Richardson Bay were polluting its waters.

The Clean Vessel Act of 1992 found that sewage discharged by recreational vessels because of an inadequate number of pumpout stations was a substantial contributor to localized degradation of water quality. The Act establishes a grant program to increase the number of pumpout and dump stations. In California, the grant program is administered by the Department of Boating and Waterways. Although the number of sewage disposal facilities has increased under the Clean Vessel Act, there are still an inadequate number of pumpout and dump stations. In issuing Clean Vessel Act grants, the Department of Boating and Waterways uses the criterion of one dump station for every 300 vessels of between 16 and 26 feet, and one pumpout station for every 300 vessels 26 feet or greater (Department of Boating and Waterways State Vessel Waste Disposal Plan). The federal guidelines for pumpout and dump stations is one station for every 300 to 600 vessels over 16 feet length overall (Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines, April 11, 1994). In addition to the Federal requirements, the California Harbors and Navigation Code (Chapter 6, section 776), states that “every vessel terminal shall, as required by the regional board for the protection of the quality of the waters of this state, be equipped with vessel pumpout facilities for the transfer and disposal of sewage from marine sanitation devices.” A vessel terminal is defined as “any private or public shoreside installation on any waters of this state which provides mooring, docking, berthing, and other facilities for the use of vessels.

In addition to providing an adequate number of pumpouts for boats with sewage retention devices at a marina, it is critical to consider the cost and location of the pumpout facility. Free or inexpensive pumpouts, conveniently located, increase their use by boaters. A study conducted in Maryland determined that the availability of a pump-out facility at a boater’s marina increased the likelihood of pumping by two-fold (Strand and Gibson, 1990). This study also found that vessels in transition are less likely to use marina facilities. Strand and Gibson (1990) also determined that a higher price for using pumpout facilities negatively influenced pumpout use. Although, this study took place in Maryland, similar trends are found throughout the U.S. In summary, when assessing the need for additional sewage disposal units at marinas in an area, it is important to consider the number of boats that will be serviced along with a pumpout's convenience and cost.

### **Statement of Purpose**

The purpose of this report is to recommend minimum requirements for establishing an adequate number of pumpout and dump stations for marinas located in Region 2, excluding Tomales Bay.

The Harbors and Navigation Code (Chapter 6, sections 776 and 778, Division 3) provides the statutory authority for the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) to develop and adopt regional standards and require installation of sewage disposal facilities at marinas. The California Code of Regulations (CCR), Title 23, Chapters 20 and 20.1, contains standards establishing criteria for the design, construction, operation, and maintenance of pumpout facilities (Sections 2815 through 2829), and specifies administrative procedures to be followed to provide a standard method of determining which marinas shall be required to install and operate pumpout facilities (Sections 2833 through 2835). The Department of Boating and Waterways contracted with the San Francisco Estuary Project (SFEP) (Contract #00-107-744, Amendment 3) to prepare this report for the RWQCB in Region 2.

### **Scope of Project**

This report reviews the information for all marinas and harbors in Region 2, with the exception of Tomales Bay, which will be addressed in a separate report. In addition, this report assesses the effectiveness of current vessel sewage waste programs. The San Francisco Estuary Project and the Department of Boating and Waterways will assist the San Francisco Bay RWQCB in establishing regional standards defining an adequate number of pumpouts and dump stations for marinas and harbors in Region 2.

## **Materials and Methods**

### **Marinas and Harbors in Region 2**

A list of all of the marinas in Region 2, excluding Tomales Bay, was compiled between October 2003 and March 2004. Marinas range from facilities that have berths for boats and floating homes to residential areas with boats docked at individual homes. Facilities that only contained launch ramps were not included on this list. The list of marinas and harbors was created from the following sources: 1) the San Francisco Estuary Project, 2) California Coastal Commission (Vivian Matuk), 2) "SEA Magazine" (current list of marinas, March 2004), 4) "Slips 2004: Annual Guide to Pacific Coast Marinas" and 5) marina lists from the Internet. Although most marinas in Region 2 have been identified, there may be some facilities that were missed in the research. The types of facilities that might have been missed include gated communities with boats docked at individual homes and small businesses that have a limited number of boats in the water. In some areas of Region 2, for example Richardson Bay, there are anchor-outs and possibly illegal moorings that are not included in the marina counts.

### **Marina Surveys**

Phone surveys were conducted between November 2003 and March 2004 for each marina in Region 2, excluding Tomales Bay. A copy of the marina survey is included in Appendix 1. The survey includes the following general items: name of marina, physical address, county, water body, mailing address, survey respondent and title, public/private facility, GPS coordinates, number of berths, size range of vessels. In addition survey respondents were asked if the following features were available at the marina: onshore restroom, fuel dock, and/or launch ramp/hoist. If a ramp or hoist was available an estimated rate of usage was also requested.

Survey respondents were also asked to estimate the following items: 1) the number of vessels with MSD's at marina terminal requiring pumpout facility; 2) the number of vessels with portable toilets at the marina; 3) the number of transient vessels with MSD's requiring pumpout facilities; and 4) the number of live aboard vessels at the marina. It is important to note that these values are general estimates. In a few cases, if the respondent didn't know the answer to these questions, estimates were made by the San Francisco Estuary Project staff during on-site visits. These values appear in italics.

Survey respondents were asked about the services their facility provides for boater's vessel sewage. They were asked if their facility had a pumpout and/or dump station. If they had a pumpout, they were also asked about the usage, capacity, depth of water at the pumpout, installation costs, disposal/treatment costs, operation/maintenance costs, and if the general public has access to the pumpout. In addition, several respondents noted if they were hooked directly to sewer lines, had an onsite mobile unit, or used a commercial pumpout service. This information is included in the results table, but since this information was not directly asked in the survey, a blank answer does not necessarily indicate that the marina does not have that type of service.

Approximately 50 on-site surveys were conducted for marinas which needed GPS coordinates and for marinas with incomplete survey results. The majority of GPS coordinates were obtained from the California Coastal Commission (Vivian Matuk). Additional GPS coordinates were obtained from marina phone surveys. New GPS readings were taken by SFEP staff (Karen McDowell or Joan Patton) for marinas that did not have any coordinates from the first two sources. A few GPS coordinates were calculated by staff at San Francisco Bay Regional Water Quality Control Board.

In addition to contacting marinas, SFEP staff also contacted MT Head, a mobile pumpout service, to confirm pumpout service to marinas. MT Head is the only large-scale pumpout service in the San Francisco Bay Area that services boats at multiple marinas. There are several other onsite mobile services that operate at individual marinas, including one in San Rafael and at one marina in Alameda.

## **RESULTS**

SFEP identified 99 marinas and harbors in Region 2 and was able to get phone surveys completed for 97 marinas. The managers at Richmond Yacht Harbor, Ltd. and Sausalito Yacht Harbor declined to answer the survey. The 99 marinas are located in portions of 9 counties including: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. The complete survey results for all the marinas in Region 2, except for Tomales Bay, are listed in Appendix 2.

SFEP identified 20,543 permanent slips in the 99 marinas identified in Region 2 (Table 1). An additional breakdown within each county is also available in Table 1. It is estimated that 12,309 vessels docked at permanent slips may contain an MSD that requires a pumpout, and an additional 1,746 vessels may contain portable toilets. These figures may be underestimates, since the totals did not include marinas that had an unknown number of vessels in a specific category. Also, the marinas that indicated “few” or “some,” were not included in the totals. There were more unknown values for portable toilets than for MSDs requiring pumpouts.

There are 1,334 live-aboards in Region 2. Although this value is fairly accurate, it only represents boats that are formally designated as live-aboards. Some respondents acknowledged that there are people who spend time on boats that are not officially designated as a live-aboard. In addition, there are some people who stay on their boats for a short period of time (a weekend, or a few weeks on vacation). These are also not included in the live-aboard counts.

In addition to the boats that occupy the permanent slips, the marinas in Region 2 received approximately 12,697 visits per year from transient vessels that may require a pumpout (Table 1). A transient vessel visit is considered a visit from a vessel that is not permanently docked at that marina. It should be noted that the number of transient vessel visits can include repeat visits by individual boats, boats that visit one marina which are permanently docked at another Region 2 marina, and boats that come into the region from other areas.

Of the 99 marinas in Region 2, only 45 marinas have a pumpout station. These 45 marinas have a total of 60 pumpout stations (some marinas have more than one pumpout station). Fifty-six of the pumpout stations are currently operational. Two of the pumpouts were newly installed, but were not in service at the date of the survey. The pumpouts at Glen Cove Marina and Berkeley Marine Center are currently not in operation. Three of the marinas (Paradise Cay Yacht Harbor, Marin Collection LLC, and Richmond Yacht Club) have a total of 4 pumpouts, but they are not available for public use. The remaining 52 operational pumpouts are available for public use. At any given time, there may be pumpouts which are non-operational for short periods.

Of the 99 marinas in Region 2, there are only 4 marinas that have dump stations. The four marinas that have a dump station include: Loch Lomond Marina (San Rafael), Clipper Yacht Harbor (Sausalito), San Rafael Yacht Harbor (San Rafael), and Docktown Marina (Redwood City). Most of the respondents from these marinas mentioned that they were pleased with the performance of the dump stations. All of these facilities are available for public use.

MT Head, a mobile pumpout service, has contracts with boaters from several different marinas in Region 2. In Richardson Bay, MT Head services about 400 boats per month (pumping out each boat twice per month). In addition, MT Head services approximate 100 boats in Alameda, and 40 boats in Pete’s Harbor (Redwood City). At some of the marinas, the mobile services are voluntary, while other marinas have mandatory programs. Cass Marina pays for the service for all of the tenants that have holding tanks. Service is mandatory for all tenants with a holding tank at Arques Shipyard & Marina, and for all live-aboards at Richardson Bay Marina and Pete’s Harbor. Mobile pumpout services are voluntary at Galilee Marina, Marina Plaza, and Ballena Isle Marina. MT Head is the only mobile pumpout service in Region 2 that services multiple marinas, but there are two other mobile pumpout services that are available at two other marinas.

## **RECOMMENDATIONS**

### **Guidelines**

Management efforts to reduce the effects of boat generated sewage discharges, should look to install pumpouts at marinas that permanently berth vessels with sewage retention devices and keep the fees reasonably low. The primary goal is to have one pumpout station/dump station for every 300 boats in a given size range (detailed below). Additional units will not be recommended in cases where marinas are over the 1:300 ratio but within 20% of the guideline.

The requirements for pumpout and dump stations in Region 2 shall be:

1. Vessel terminals with a capacity for boats 16 - 26 feet long:
  - a. Shall have a minimum of one dump station;
  - b. Shall have one dump station for every 300 boats of this size range.
  - c. In lieu of installing a dump station, facilities can use an alternative listed below in the "Waste Disposal Equipment" section.
2. Vessel terminals with a capacity for boats 26 feet or greater in length:
  - a. Shall have a minimum of one pumpout station;
  - b. Shall have one pumpout station for every 300 boats of this size range.
  - c. Shall have one dump station if the facility contains any vessels in this size range that contain portable toilets.
  - d. In lieu of installing a pumpout station or a dump station, facilities can use an alternative listed below in the "Waste Disposal Equipment" section.
3. Dump stations shall be located in conjunction with pumpout stations whenever possible.
4. Requirements for pumpout stations may be waived if the vessel terminal requires that all vessels with overboard discharge capability maintain a contract with a pumpout service. The pumpout service shall provide for a minimum of one pumpout per month. Proof of a pumpout service contract shall be maintained for each vessel by the marina.
5. At vessel terminals with live-aboard vessels. All live-aboard vessels incapable of moving under their own power shall have all overboard discharge piping permanently sealed; unless such discharge piping is plumbed directly to appropriate on-shore waste facilities.
6. All pumpouts must be equipped with a meter (Harbors and Navigation Code (Chapter 6, section 776))
7. Every vessel pumpout facility shall have a notice posted on the facility identifying the city, county, local public health officer, or boating law enforcement officer, and telephone number for the responsible enforcing party. (Harbors and Navigation Code (Chapter 6, section 777))
8. Pumpouts must be operated and maintained in working order as detailed in the Operation and Maintenance section.

## **Operation and Maintenance**

Vessel terminal owners/operators shall design, install, operate and maintain their pumpout stations in conformance with California Code of regulations, Chapter 20, articles 1, 2 and 3 and Harbors and Navigation Code Chapter 6.

As a minimum it is recommended that vessel terminal owners/operators provide the following:

1. Vessel terminal owners/operators shall prepare a set of operation and maintenance instructions to be used in the operation of the pumpout station/dump stations. The operation and maintenance instructions shall be available for inspection at the pumpout station/dump station and if found to be deficient by San Francisco Bay Regional Board staff, the vessel terminal owner/operator shall correct the instruction within thirty days.
2. The operation instructions shall have a detailed explanation of valve positions when the system is transferring sewage and when the pumpout station/dump station is not being used.
3. The operation and maintenance instructions shall include methods that will be used to isolate portions of the pumpout station/dump station system for maintenance and repair.
4. All pumpout station/dump stations shall be operated and maintained in such a manner that there shall be no leakage or spillage of sewage.
5. The vessel terminal owner/operator shall inspect their pumpout stations and dump stations at least three times per week. The purpose of such inspections is to ensure the pumpout stations/dump stations are working properly and there are no leaks of sewage into the local waters.

Vessel terminal owners/operators should keep in stock readily replaceable spare parts such as diaphragms, spare nozzles, and hoses. When a pumpout station or dump station is inoperable, its owner shall initiate appropriate repairs within 24 hours of noticing the inoperability. Where the inoperability is found to be due to the failure of a readily available part, such as a hose, the repair must be done within 24 hours. Where necessary, the vessel terminal owner/operator shall secure a licensed plumbing contractor who would assess the reason that the pumpout station/dump station is not working properly, identify the steps required to bring that pumpout station/dump station back into working order, and identify a reasonable time frame to complete the necessary repairs. The vessel owner/operator must initiate the repairs promptly, and to take all reasonable steps to assure that the repairs are completed within the time frame identified by the contractor. The vessel terminal owner/operator shall post a sign on the pumpout station/dump station indicating that it is not working, with a map of other locations of pumpout stations/dump stations.

6. Vessel terminal owners/operators must maintain, and provide for inspection at any time, maintenance and monitoring logs at the site of each pumpout station/dump station.
7. Vessel terminal owners/operators shall post signage at each pumpout location that indicates operation instructions, fees, restrictions, and a contact name and number if the facility is inoperable.

## **Waste Disposal Equipment**

Information from this section was obtained and prepared by Kevin Atkinson, Department of Boating and Waterways.

### **Dump Stations**

Typically a dump station is installed for the specific use of boaters to empty portable toilet units (port-a-potties) carried on-board their vessels. These facilities are a dedicated piece of equipment that typically resembles a large sink basin, often equipped with a water hose to flush out the portable units. These basins may be gravity discharged to the sewer line or may be pumped depending upon the site conditions. The cost to install a dump station can range anywhere from \$500 to \$10,000, depending upon site conditions.

Viable alternatives to a dedicated dump station for small marine terminal operations might be an adapter or “wand” for use with an existing pumpout station or the use of a designated landside restroom that is specifically identified for such purpose. Designating a restroom for such use requires adequate signage to direct the boaters to the specific restroom; as well as an understanding on the part of the marina operator that such installations can result in some sloppy practices on the part of the boaters and therefore may require additional cleanup and maintenance requirements.

Maintenance costs for dump stations are typically very low: \$100 to \$500/year. Actual costs can vary considerably depending upon type and age of equipment, preventative maintenance, installation, and improper use. By and large the majority of problems encountered with dump station equipment stems from lack of maintenance and improper use of the equipment. The equipment is generally reliable, but lack of maintenance and improper use by individuals can result in clogged plumbing lines, and there have been cases where thoughtless boaters have improperly used the dump stations for trash receptacles, etc. There have been cases where thoughtless boaters have improperly used the dump stations for trash receptacles, etc. Boater education and adequate instructions posted at the dump stations are essential to maintaining minimum problems and a working installation.

### **Pumpout Stations**

Typically a pumpout station is installed in a marina at a convenient location such as an end tie dock or dedicated pumpout berthing spot for boaters. Typically pumpout stations empty the on-board holding tanks into a landside sewage system or to a municipal sewage line. These facilities typically consist of a pump unit with and an associated suction hose and shut off valve. The cost to install a pumpout station can range anywhere from \$3,000 to \$20,000, depending upon site conditions.

A possible alternative to a dedicated pumpout station is a mobile service that services all boats with installed heads on-board. This type of service empties the boat holding tanks and then takes the material to a local pumpout station for emptying into the municipal sewer system. The marinas then condition their slip rentals to require that all berthers with heads on-board their vessels must subscribe to such service. This alternative still requires that a pumpout station be located within a reasonable distance of the marina. Someone must also operate and maintain this pumpout facility for such use. One option would be that all marinas or boaters pay into a dedicated account for such a facility.

Maintenance costs for pumpout stations can typically vary from \$100 to \$2,500/year. Actual costs vary considerably depending upon type and age of equipment, preventative maintenance, installation, and improper use. By and large the majority of problems encountered with pumpout station equipment stems from improper installation, lack of maintenance or improper use of the equipment. The equipment is generally reliable, but the lack of maintenance or improper use by individuals can result in ruptured diaphragms, broken controls, or in some rare cases theft of

components (hoses and plumbing attachments). There have also been cases where thoughtless boaters have improperly used the pumpouts for emptying bilges, etc. This can result in other materials such as oily bilge waste, rags, fishing hooks, sinkers, barnacles or sea shells, being sucked into the equipment and clogging the system. Boater education and adequate instructions posted at the pumpout stations are essential to maintaining minimum problems and a working installation.

### Funding

Grant funds are available to public agencies and private marina operators to install and maintain both pumpout and dump stations. This program is a federal grant program known as Clean Vessel Act Grants. This grant program will reimburse the grantee up to 75% of the costs for installing and maintaining these facilities. The eligible grant costs include all equipment, electrical, plumbing and permit fees associated with the project. Funding is limited. For more specific grant information visit the Department of Boating and Waterways website: [www.dbw.ca.gov](http://www.dbw.ca.gov) or contact Kevin Atkinson, CVA Grants, 916-263-8149.

### **Recommended Facilities**

Using the survey results and the guidelines outlined above, recommendations were made for the installation and maintenance of pumpout stations in Region 2, excluding Tomales Bay. In general, recommendations were made based on the number of permanent vessels at each marina. For Angel Island State Park, the recommendations were also based on transient traffic, since this marina's primary function is to attract transient vessels.

A total of 45 pumpout stations and 72 dump stations are recommended for installation in Region 2, excluding Tomales Bay (Table 2). As demonstrated in Table 2, the majority of marinas will need to install at least one type of station (pumpout or dump station). Many marinas are recommended to install both types of systems. The actual number of stations installed will probably be less than the recommended number due to some marinas taking advantage of some of the alternative options that were mentioned in the Guidelines and Waste Disposal Equipment sections. There are a few marinas that already have fulfilled the recommended number of pumpout and dump stations. Additionally, some marinas were not required to install any equipment. These marinas will be described below.

Eight facilities only housed small rental boats and had launch ramps that only allowed for small vessels; therefore they were not required to install any sewage disposal facilities. These facilities included: Bolinas Rod & Boat Club, Del Valle Park Company, Lake Chabot Marina, Shadow Cliffs Regional Recreation Area, Vasona Lake, Velma Million Marina, Lake Merritt Boating Center, and Central Park/Lake Elizabeth. In addition five facilities are used for Salvage or for Sales and Service. These facilities include Liberty Ship Marina, Marine Max, Keefe Kaplan Maritime Inc., Hi Tide Boat Sales & Services, and American Oceanics. Since these marinas are not used for recreational purposes, these facilities are not required to install sewage disposal facilities, but they should have information available on the location of nearby disposal facilities.

As noted above, Angel Island State Park's recommendations were based on transient vessels, since their primary purpose is to attract transient boaters that stay anywhere from 1 to 7 days. Angel Island State Park staff noted that they previously had a pumpout, but due to their island location the maintenance fees were too high to maintain the system. Two additional marinas (Berkeley Marine Center, and Glen Cove Marina) had pumpout stations that are permanently out of service. Both of these marinas were recommended to install a pumpout station. They have the option of restoring service to the old pumpout or installing a new system.

**Recommended time scale for installation**

The marinas that have been recommended to install pumpouts and/or dump stations will have one year to complete installation. This process should take place on the following time line:

<u>TASK</u>	<u>COMPLIANCE DATE</u>
1) Indicate commitment to install the pumpout stations and/or dump stations via letter to the Executive Officer of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB).	30 days after State Board Order Issued.
2) Prepare and submit plans and specifications for pumpout station/dump station installation to the Executive Officer of the SFBRWQCB. If the Executive Officer does not approve of the pumpout station and dump station location, or determines the plans and specifications are inadequate, the vessel terminal operator shall prepare new or supplemental plans and specifications in accordance with a schedule set by the Executive Officer of the SFBRWQCB.	90 days after commitment.
3) Submit plans and agreements for pumpout station/dump station maintenance to the Executive Officer of the SFBRWQCB.	30 days after plans and specs approved.
4) Begin construction and installation of pumpout station/dump station.	30 days after maintenance plans submitted to Regional Board.
5) Complete construction and installation of pumpout station/dump station.	140 days after construction began.
6) Full compliance with State Board order; notify Executive Officer of the SFBRWQCB.	30 days after construction completed.

**Justification of recommendations**

It is critical to protect the waters in Region 2 from the effect of fecal contamination from the improper disposal of human waste by boaters. Boaters are much more likely to use disposal facilities in their own marina. Because of this it was recommended that the majority of marinas have disposal facilities that service the boats that are housed in their facility. Although there are some costs involved in installing pumpout and dump stations, facilities can apply for grants through the Department of Boating and Waterways to cover at least 75% of the cost.

**REFERENCES**

Strand, Ivan E. and Gibson, George R. (1990). "The Use of Pump-Out Facilities by Recreational Boaters in Maryland." Estuaries, volume 12 (3): 282-286

**Table 1.** Totals for Region 2 Marinas, excluding Tomales Bay.

	Region 2	Alameda County	Contra Costa County	Marin County	Napa County	San Francisco County	San Mateo County	Santa Clara County	Solano County	Sonoma County
<b>NUMBER OF MARINAS</b>	99	26	12	31	2	7	10	3	5	3
<b>PERMANENT SLIPS</b>										
Total number of slips	20,543	6,541	2,826	3,713	200	2,031	3,045	77	1,618	492
Estimated number of vessels requiring pumpout facilities	12,309	4,368	1,444	2,262	150	1,225	1,730	2	1,059	69
Estimated number of vessels with portable toilets	1,746	454	472	186	10	275	270	0	27	52
Estimated number of live aboards	1,334	517	189	251	7	53	226	0	88	3
<b>TRANSIENT VESSELS</b>										
Estimated number of visits per year from vessels which have an MSD that requires a pumout	12,697	1,341	369	2,965	60	5,100	812	0	1,750	300
<b>SEWAGE PUMPOUTS</b>										
Number of marinas with operating pumouts available for public use	38	11	4	6	1	5	6	0	3	2
Number of marinas with pumouts for private use only	3	0	1	1	0	0	1	0	0	0
Number of marinas with new pumpouts that are not in service yet	2	1	0	1	0	0	0	0	0	0
Number of marinas with pumpouts that are not operational	2	1	0	0	0	0	0	0	1	0
Total number of marinas with sewage pumouts	45	13	5	8	1	5	7	0	4	2
Total number of sewage pumpouts	60	20	6	13	1	6	7	0	5	2
<b>DUMP STATIONS</b>										
Number of marinas with dump stations	4	0	0	3	0	0	1	0	0	0
Total number of dump stations	4	0	0	3	0	0	1	0	0	0

**Table 2.** The recommended number of dump stations and pumpout stations to be installed at each marina in Region 2 (the minimum # of stations needed minus the # of existing units).  
 The counties represented in Region 2 include Alameda, Contra Costa, Marin, Napa (NA), San Francisco (SF), San Mateo, Santa Clara (SC), Solano (SOL), and Sonoma (SON). (unknown = unk.)

	#	Facility	Private or Public			Dump Stations			Sewage Pumpouts			Mobile Svc or Direct Hookup**	Total Marina Capacity			Boats Requiring Pumpout	# of Portable Toilets	Transient Boats Requiring Pumpout (boats/yr)	# of Live Aboards at Marina	Onshore Restroom
			Owned	Operated	Sewage Pumpout	Existing Units	Min. Need	# to Instal	Existing Units	Min. Need	# to Instal		Permanent Slips	Size (Feet) Min	Max					
A	1	Aeolian Yacht Club	Private	Private	N/A	0	1	1	0	1	1		93	25	50	86	2	Very Few	5	Yes
L	2	Alameda Marina	Private	Private	N/A	0	1	1	0	1	1		530	18	60	342	30	Few	7	Yes
A	3	Ballena Isle Marina	Private	Private	Public	0	1	1	1	1	0	Mobile	504	20	90	250	12	unk.	50	No
M	4	Barnhill Marina	Private	Private	N/A	0	1	1	0	1	1	Hookup	68	18	40	5	0	0	46	No
E	5	Berkeley Marina	Public	Public	Public	0	1	1	2	3	1		1,100	20	85	990	100	50	100	Yes
D	6	Berkeley Marine Center	Private	Public	N/A	0	1	1	Not Op.	1	1		60	20	50	30	20	250	0	Yes
A	7	Central Park/Lake Elizabeth	Public	Public	N/A	0	0	0	0	0	0		22	8	19	0	0	0	0	Yes
	8	Del Valle Park Company	Public	Public	N/A	0	0	0	0	0	0		40	8	20	0	0	0	0	Yes
	9	Embarcadero Cove Marina	Private	Private	N/A	0	1	1	0	1	1		120	24	62	105	10	Few	10	Yes
C	10	Emery Cove Yacht Harbor	Private	Private	Public	0	1	1	2	2	0		430	30	60	408	20	400	28	Yes
O	11	Emeryville Marina	Public	Public	Public	0	1	1	2	1	0		409	16	66	225	0	240	20	Yes
U	12	Encinal Yacht Club	Private	Private	N/A	0	0	0	0	0	0		0			0	0	50	0	Yes
N	13	Fifth Avenue Marina	Private	Private	N/A	0	1	1	0	1	1		107	25	35	75	0	0	5	Yes
T	14	Fortman Marina	Private	Public	Public	0	1	1	1	1	0		486	20	60	242	100	75	49	Yes
Y	15	Grand Marina	Private	Private	Public	0	1	1	1	1	0		400	25	90	350	Few	120	40	No
	16	Lake Chabot Marina	Public	Public	N/A	0	0	0	0	0	0		40	10	20	0	0	0	0	Yes
	17	Lake Merritt Boating Center	Public	Public	N/A	0	0	0	0	0	0		20	10	20	0	0	0	0	Yes
	18	Marina Village Yacht Harbor	Public	Public	Public	0	1	1	2	2	0		750	28	70	375	40	few	75	Yes
	19	Marinemax	Private	Private	N/A	0	0	0	0	0	0		22	30	60	22	0	0	0	Private
	20	Mariner Square	Private	Private	Public	0	1	1	1*	1	0		50	30	130	38	0	few	5	Yes
	21	Oakland Yacht Club/Pacific Marina	Private	Private	N/A	0	1	1	0	1	1		225	20	75	101	20	6	19	Yes
	22	Park Street Marina	Private	Private	Public	0	0	0	1	1	0		25	30	63	25	0	few	2	No
	23	Port of Oakland	Public	Public	Public	0	1	1	3	1	0		500	20	110	300	80	75	8	Yes
	24	Portobello Marina/D Anna Yacht Ctr.	Private	Public	Public	0	0	0	1	1	0		65	28	140	35	0	0	3	Yes
	25	San Leandro Marina	Public	Public	Public	0	1	1	2	2	0		455	24	60	364	20	75	45	Yes
	26	Shadow Cliffs Regional Rec. Area	Public	Public	N/A	0	0	0	0	0	0		20	14	17	0	0	0	0	Yes
C	27	Brickyard Cove Marina	Private	Private	N/A	0	0	0	0	1	1	Mobile	250	28	60	225	0	0	12	Yes
O	28	Channel Marina	Private	Private	N/A	0	1	1	0	1	1		70	24	30	unk.	unk.	unk.	0	Yes
N	29	Keefe Kaplan Maritime Inc. (KKMI)	Private	Private	N/A	0	0	0	0	0	0		20	18	112	18	2	sales & service	0	Yes
T	30	Marina Bay Yacht Harbor	Private	Private	Public	0	1	1	2	2	0		850	20	115	550	Few	40/yr + BYC Marina	75	Yes (3)
R	31	Martinez Marina	Public	Public	Public	0	1	1	1	1	0		350	18	50	125	Few	350	35	Yes
A	32	McAvoy Harbor	Private	Private	N/A	0	1	1	0	1	1		300	20	50	unk.	250	Few	0	Yes
	33	Pittsburg Marina	Public	Public	Public	0	1	1	1	1	0		485	20	50	340	150	12	41	Yes
C	34	Point San Pablo Yacht Harbor	Private	Public	Public	0	1	1	1	1	0	Hookup	212	20	60	20	20	1	21	Yes
O	35	Richmond Yacht Club	Private	Private	Private	0	1	1	1	1	0		246	20	50	150	50	Few	4	Yes
S	36	Richmond Yacht Harbor Ltd.	Private	Private	N/A	0	1	1	0	1	1		15	14	40	6	unk.	unk.	1	unk.
T	37	Rodeo Marina	Private	Private	N/A	0	1	1	0	0	0		18	14	25	0	0	0	0	No
A	38	Sugar Dock Marina	Private	Private	N/A	0	0	0	0	1	1	Hookup	10	27	280	10	0	6	0	No

**Table 2 (cont).** The recommended number of dump stations and pumpout stations to be installed at each marina in Region 2 (the minimum # of stations needed minus the # of existing units). The counties represented in Region 2 include Alameda, Contra Costa, Marin, Napa (NA), San Francisco (SF), San Mateo, Santa Clara (SC), Solano (SOL), and Sonoma (SON). (unknown = unk.)

	#	Facility	Private or Public			Dump Stations			Sewage Pumpouts			Mobile Svc or Direct Hookup**	Total Marina Capacity			Boats Requiring Pumpout	# of Portable Toilets	Transient Boats Requiring Pumpout (boats/yr)	# of Live Aboards at Marina	Onshore Restroom
			Owned	Operated	Sewage Pumpout	Existing Units	Min. Need	# to Install	Existing Units	Min. Need	# to Install		Permanent Slips	Size (Feet) Min Max						
	39	145 Marina	Private	Private	N/A	0	1	1	0	1	1		10	20	30	unk.	unk.	0	0	No
	40	American Oceanics	Private	Private	N/A	0	0	0	0	0	0		16	16	70	0	1	0	0	Yes
	41	Angel Island State Park	Public	Public	N/A	0	1	1	0	1	1		2	48	56	0	unk.	1300	0	Yes
M	42	Arques Shipyard and Marina	Private	Private	N/A	0	1	1	0	1	1	Mobile	89	25	50	13	0	0	8	Yes
A	43	Bel Marin Keys Yacht Club	Private	Private	N/A	0	1	1	0	1	1		63	12	48	unk.	Some	0	unk.	No
R	44	Bolinas Rod & Boat Club	Private	Private	N/A	0	0	0	0	0	0		40	17	21	0	0	0	0	Yes
I	45	Cass Marina	Private	Public	N/A	0	1	1	0	1	1	Mobile	30	22	35	5	20	0	0	Yes
N	46	Clipper Yacht Harbor	Private	Private	Public	1	1	0	1	2	1		600	20	60	575	Few	75	50	Yes
C	47	Corinthian Yacht Club	Private	Private	N/A	0	1	1	0	1	1		93	25	50	70	0	60	0	Yes
O	48	Dolphin Marin and Lofts	Private	Private	N/A	0	0	0	0	1	1		5	30	50	5	0	0	3	No
U	49	Galilee Harbor	Private	Private	N/A	0	1	1	1*	1	0	Both	38	24	66	9	20	0	38	Yes
N	50	Hi Tide Boat Sales & Services	Private	Private	N/A	0	0	0	0	0	0		10	15	30	0	0	0	0	Private
T	51	Liberty Ship Marina	Private	Private	N/A	0	0	0	0	0	0		54	30	80	45	0	0	0	Yes
Y	52	Loch Lomond Marina	Private	Public	Public	1	1	0	3	2	0		518	20	62	400	80	100	52	Yes
	53	Lowrie Yacht Harbor	Private	Public	N/A	0	1	1	0	1	1		110	25	65	55	12	36	few	Yes
	54	Marin Boat House	Private	Private	N/A	0	1	1	0	1	1		12	14	40	unk.	0	unk.	Maybe	Yes
	55	Marin Yacht Club	Private	Private	Public	0	1	1	1	1	0		118	36	80	118	0	240	0	Yes
	56	Marina Plaza Harbor	Private	Private	Public	0	1	1	2	1	0	Mobile	103	8	80	90	Few	4	0	No
	57	Paradise Cay Yacht Harbor	Private	Private	Private	0	1	1	2	1	0		163	15	50	50	some	30	0	Yes
	58	Pelican Harbor	Private	Private	N/A	0	0	0	0	1	1		90	30	80	90	0	0	9	Yes
	59	Richardson Bay Marina	Private	Private	Public	0	1	1	1	1	0	Mobile	220	26	36	165	Few	0	22	No
	60	San Francisco Yacht Club	Private	Private	N/A	0	1	1	0	1	1		187	25	53	47	unk.	Some	0	Yes
	61	San Rafael Yacht Club	Private	Private	N/A	0	1	1	0	1	1		18	14	30	0	unk.	400	0	Yes
	62	San Rafael Yacht Harbor	Private	Private	N/A	1	1	0	0	1	1	Mobile	140	20	55	70	30	0	40	Yes
	63	Sausalito Marine	Private	Private	N/A	0	0	0	0	1	1		60	28	50	30	0	0	Few	Yes
	64	Sausalito Yacht Harbor			N/A	unk.	1	1	unk.	2	2		580	unk.	unk.	250	Some	unk.	unk.	unk.
	65	Schoonmaker Point Marina	Private	Private	Public	0	0	0	2	1	0		161	35	70	125	0	360	12	Yes
	66	Shelter Cove Marina	Private	Private	N/A	0	1	1	0	1	1		17	30	unk.	unk.		unk.		unk.
	67	The Cove Apartments & Marina	Private	Private	N/A	0	1	1	0	1	1		55	10	50	10	3	0	0	No
	68	Trade Winds Marina	Private	Private	N/A	0	1	1	0	1	1		30	26	40	20	Some	0	12	Yes
	69	Travis Marina	Public	Public	N/A	0	1	1	0	1	1		81	20	42	20	20	360	5	Yes
N	70	Napa Valley Marina	Private	Public	Public	0	1	1	1	1	0		200	14	55	150	10	60	7	Yes
A	71	Napa Yacht Club	Private	Private	N/A	0	1	1	0	1	1		unk.	unk.	unk.	unk.	unk.	unk.	unk.	N/A
S	72	Fisherman's Wharf/Hyde St. Harbor	Public	Public	Public	0	1	1	1	1	0	Mobile	180	16	100	20	25	150	seasonal	No
F	73	Mission Creek Harbor	Private	Private	N/A	0	1	1	0	1	1		55	25	55	12	Few	0	20	Yes
	74	Pier 39 Marina	Private	Public	Public	0	1	1	1	1	0		310	19	60	295	15	3500	30	Yes
	75	San Francisco Marina East Harbor	Public	Public	Public	0	1	1	1	1	0		342	20	35	103	100	0	0	Yes
	76	San Francisco Marina West Harbor	Public	Public	Public	0	1	1	1	1	0		344	20	90	240	100	200	0	Yes
	77	South Beach Harbor	Public	Public	Public	0	1	1	2	2	0		700	26	150	490	35	1100	0	Yes
	78	Treasure Island Marina	Private	Private	N/A	0	1	1	0	1	1		100	18	49	65	Few	150	3	Yes

**Table 2 (cont).** The recommended number of dump stations and pumpout stations to be installed at each marina in Region 2 (the minimum # of stations needed minus the # of existing units). The counties represented in Region 2 include Alameda, Contra Costa, Marin, Napa (NA), San Francisco (SF), San Mateo, Santa Clara (SC), Solano (SOL), and Sonoma (SON). (unknown = unk.)

	#	Facility	Private or Public			Dump Stations			Sewage Pumpouts			Mobile Svc or Direct Hookup**	Total Marina Capacity			Boats Requiring Pumpout	# of Portable Toilets	Transient Boats Requiring Pumpout (boats/yr)	# of Live Aboards at Marina	Onshore Restroom
			Owned	Operated	Sewage Pumpout	Existing Units	Min. Need	# to Install	Existing Units	Min. Need	# to Install		Permanent Slips	Size (Feet) Min Max						
S	79	Bair Island Marina	Private	Public	N/A	0	1	1	0	1	1		95	30	70	90	5	12	0	Yes
A	80	Brisbane Marina	Public	Public	Public	0	1	1	1	2	1		580	22	100	568	11	100	0	Yes
N	81	Coyote Point Marina	Public	Public	Public	0	1	1	1	1	0		550	22	65	350	100	100	0	Yes
	82	Docktown Marina	Private	Private	N/A	1	0	0	0	1	1	Mobile	152	32	50	90	0	0	65	Yes
M	83	Marine Collection LLC	Private	Private	Private	0	1	1	1	1	0		20	20	40	6	0	Few	1	Private
A	84	Oyster Cove Marina	Private	Private	Public	0	0	0	1	1	0	Mobile	237	30	60	110	0	0	23	Yes
T	85	Oyster Point Marina	Public	Public	Public	0	1	1	1	1	0		592	26	60	60	10	25	60	Yes
E	86	Pete's Harbor	Private	Private	N/A	0	1	1	0	1	1	Mobile	263	20	105	93	30	unk.	40	Yes
O	87	Pillar Point Harbor	Public	Public	Public	0	1	1	1	1	0	Mobile	371	30	65	223	74	500	37	No
	88	Port of Redwood City Yacht Harbor	Public	Public	Public	0	1	1	1	1	0		185	15	65	140	40	75	0	Yes
S	89	South Bay Yacht Club	Private	Private	N/A	0	1	1	0	1	1		15	20	34	2	0	0	0	Yes
C	80	Vasona Lake	Public	Public	N/A	0	0	0	0	0	0		40	10	20	0	0	0	0	Yes
	91	Velma Million Marina	Public	Public	N/A	0	0	0	0	0	0		22	6	14	0	0	0	0	Yes
S	92	Benicia Marina	Private	Public	Public	0	1	1	1	1	0	Mobile	320	25	70	250	20	1000	32	Yes
O	93	Glen Cove Marina	Private	Private	Public	0	1	1	Not Op.	1	1		209	24	55	150	some	unk.	16	Yes
L	94	Suisun City Marina	Public	Public	Public	0	1	1	1	1	0		155	28	50	139	7	550	0	No
	95	Vallejo Marina	Public	Public	Public	0	1	1	2	2	0	Mobile	800	12	70	400	Few	200	40	Yes
	96	Vallejo Yacht Club	Private	Public	N/A	0	1	1	0	1	1		134	20	44	120	Few	0	0	Yes
S	97	Gilardi's Lakeville Marina	Private	Public	N/A	0	1	1	0	1	1		14	20	50	4	2	50	3	Yes
O	98	Petaluma Marina	Public	Public	Public	0	1	1	1	1	0		196	22	65	35	30	250	0	Yes
N	99	Port of Sonoma Marina	Private	Private	Public	0	1	1	1	1	0		282	20	40	30	20	Few	0	No

\* New unit  
(Installation not  
complete at the  
time of the survey)

\*\*These categories were not included in the  
survey, so answers only indicate facilities  
that volunteered information about these  
services; therefore it is likely that additional  
marinas on this list have some of these  
services.

Appendix 1. Phone survey administered to all of the marinas in Region 2, excluding Tomales Bay.

### SAN FRANCISCO BAY AREA (REGION 2) MARINA SURVEY

Date of Survey: \_\_\_\_\_

Name of Marina: \_\_\_\_\_

Physical Address: \_\_\_\_\_

County, Water body: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Owner: \_\_\_\_\_

Survey Respondent and Title: \_\_\_\_\_

Public Facility: \_\_\_\_\_ Private Facility: \_\_\_\_\_

GPS Coordinates: \_\_\_\_\_

a) Number of berths: \_\_\_\_\_ Size of vessels: \_\_\_\_\_

b) Estimated number and size of vessels with sewage retention devices at marina terminal requiring pumpout facility: Number: \_\_\_\_\_ Size of vessels: \_\_\_\_\_

c) Estimated number of transient vessels with sewage retention devices requiring pumpout facilities: \_\_\_\_\_

d) Estimated number of boats with portable toilets: \_\_\_\_\_

e) Estimated number of live-aboard vessels at marina terminal: \_\_\_\_\_

f) Onshore restroom facilities: \_\_\_\_\_

g) Does marina have a pumpout station(s): \_\_\_\_\_ Dump station: \_\_\_\_\_

h) Condition of pumpout: \_\_\_\_\_ Capacity: \_\_\_\_\_ Usage: \_\_\_\_\_

i) Estimated depth of water at pumpout: \_\_\_\_\_

j) Estimated pumpout installation cost: \_\_\_\_\_

k) Estimated disposal/treatment cost: \_\_\_\_\_ Operation/maintenance cost: \_\_\_\_\_

l) Is this a private marina with pumpout facilities not available to general public: \_\_\_\_\_

m) Boat launch areas/ramps: \_\_\_\_\_ Location: \_\_\_\_\_

n) Estimated rate of launch usage, if available: \_\_\_\_\_

o) Does marina terminal have boat fuel-docking facilities: \_\_\_\_\_

Comments: \_\_\_\_\_

	#	Facility	Address	Mailing Address (if different)	City	Zip Code	Body of Water
A L M E D A C O U N T Y	1	Aeolian Yacht Club	980 Fernside Boulevard		Alameda	94501	Oakland Estuary
	2	Alameda Marina	1815 Clement Avenue		Alameda	94501	Oakland Estuary
	3	Ballena Isle Marina	1150 Ballena Boulevard, Suite 111		Alameda	94501	SF East Bay
	4	Barnhill Marina	2394 Mariner Square		Alameda	94501	Oakland Estuary
	5	Berkeley Marina	201 University Avenue		Berkeley	94710	SF East Bay
	6	Berkeley Marine Center	1 Spinnaker Way		Berkeley	94710	SF East Bay
	7	Central Park/Lake Elizabeth	40000 Paseo Padre Parkway		Fremont	94538	Lake Elizabeth
	8	Del Valle Park Company	6999 Del Valle Road	7000 Del Valle Road	Livermore	94550	Del Valle Reservoir
	9	Embarcadero Cove Marina	1 Embarcadero Cove		Oakland	94606	Oakland Estuary
	10	Emery Cove Yacht Harbor	3300 Powell Street, Suite 101		Emeryville	94608	SF East Bay
	11	Emeryville Marina	3310 Powell Street		Emeryville	94608	SF East Bay
	12	Encinal Yacht Club	1251 Pacific Marina		Alameda	94501	Oakland Estuary
	13	Fifth Avenue Marina	499 Embarcadero & 1 Fifth Avenue		Oakland	94606	Oakland Estuary
	14	Fortman Marina	1535 Buena Vista Avenue		Alameda	94501	Oakland Estuary
	15	Grand Marina	2099 Grand Street		Alameda	94501	Oakland Estuary
	16	Lake Chabot Marina	17936 Lake Chabot Road		Castro Valley	94546	Lake Chabot
	17	Lake Merritt Boating Center	568 Bellevue Avenue		Oakland	94610	Lake Merritt
	18	Marina Village Yacht Harbor	1050 Marina Village Parkway, 103		Alameda	94501	Oakland Estuary
	19	Marinemax	1285 Embarcadero		Oakland	94606	Oakland Estuary
	20	Mariner Square	2415 Mariner Square Drive		Alameda	94501	Oakland Estuary
	21	Oakland Yacht Club/Pacific Marina	1101 Pacific Marina		Alameda	94501	Oakland Estuary
	22	Park Street Landing Marina	2306 Blanding Avenue	2099 Grand Street	Alameda	94501	Oakland Estuary
	23	Port of Oakland	38 Webster Street	#2 Webster Street	Oakland	94607	Oakland Estuary
	24	Portobello Marina/D Anna Yacht Ctr.	7 Embarcadero West		Oakland	94607	Oakland Estuary
	25	San Leandro Marina	40 San Leandro Marina		San Leandro	94577	SF East Bay
	26	Shadow Cliffs Regional Rec. Area	2500 Stanley Blvd		Pleasanton	94566	Shadow Cliffs Lake
C O N T R A C T	27	Brickyard Cove Marina	1120 Brickyard Cove Road Point		Point Richmond	94801	SF East Bay
	28	Channel Marina	230 West Cutting Boulevard		Richmond	94804	SF East Bay
	29	Keefe Kaplan Maritime Inc. (KKMI)	530 W Cutting Boulevard		Richmond	94804	SF East Bay
	30	Marina Bay Yacht Harbor	1340 Marina Way South		Richmond	94804	SF East Bay
	31	Martinez Marina	7 North Court		Martinez	94553	Carquinez Strait
	32	McAvoy Harbor	1991 McAvoy Road		Bay Point	94565	Sac. River-Honker Bay
	33	Pittsburg Marina	51 Marina Boulevard Suite E		Pittsburg	94565	Sac.-SJ Delta-NY Slough
	34	Point San Pablo Yacht Harbor	1900 Western Drive		Point Richmond	94807	San Pablo Bay
	35	Richmond Yacht Club	351 Brickyard Cove Road	P.O. Box 70067	Richmond	94807	SF East Bay
	36	Richmond Yacht Harbor Ltd.	320 W. Cutting Boulevard		Richmond	94804	SF East Bay
	37	Rodeo Marina	13 Pacific Avenue	P.O. Box 1457 Lovelock, Nevada 89419	Rodeo	94572	San Pablo Bay
	38	Sugar Dock Marina	800 Wharf Street		Richmond	94804	Sante Fe Channel, SF Bay

	#	Facility	Phone Number	Name(s) of Owner(s)	Private or Public			Degrees Latitude (North)	Degrees Longitude (West)	Location of GPS Coordinates	GPS Source
					Owned	Operated	Sewage Pumpout				
A L M E D A C O U N T Y	1	Aeolian Yacht Club	(510) 523-2586	Aeolian Yacht Club Members	Private	Private	N/A	37.75056	-122.20194	Dock Entrance	KHM
	2	Alameda Marina	(510) 521-1133	Pacific Shops, Inc.	Private	Private	N/A	37.77519	-122.24768		KHM
	3	Ballena Isle Marina	(510) 523-5528	Almar Corp.	Private	Private	Public	37.77000	-122.29000		CCC
	4	Barnhill Marina	(510) 521-8387	Barnhill Construction Co.	Private	Private	N/A	37.78981	-122.27543	Head of launch ramp	KHM
	5	Berkeley Marina	(510) 644-6376 x1	City of Berkeley	Public	Public	Public	37.86473	-122.31311	Dock J	KHM
	6	Berkeley Marine Center	(510) 843-8195	Cree and Julie Partridge	Private	Public	N/A	37.86831	-122.31822	Dock Entrance	KHM
	7	Central Park/Lake Elizabeth	(510) 790-5541	City of Fremont	Public	Public	N/A	37.54825	-121.96513	Launch Ramp	KHM
	8	Del Valle Park Company	(925) 373-0332	East Bay Regional Park in coop. w/DBW	Public	Public	N/A	37.58638	-121.70306	Launch Ramp	KHM
	9	Embarcadero Cove Marina	(510) 532-6683	Authur Wellens	Private	Private	N/A	37.78250	-122.24333	Dock Entrance	KHM
	10	Emery Cove Yacht Harbor	(510) 428-0505	Emery Cove Marina Condo. Assoc. Inc. (NP)	Private	Private	Public	37.83750	-122.30750	By office & marina	CCC
	11	Emeryville Marina	(510) 654-3716	City of Emeryville, operated by Marinas Intl.	Public	Public	Public	37.83816	-122.31326	Head of launch ramp	CCC
	12	Encinal Yacht Club	(510) 522-3272	Encinal Yacht Club (nonprofit corporation)	Private	Private	N/A	37.78251	-122.26344	Harbor Master's Office	CCC
	13	Fifth Avenue Marina	(510) 634-9810	JW Silveira	Private	Private	N/A	37.78842	-122.26306	Head of launch ramp	KHM
	14	Fortman Marina	(510) 522-9080	Henry Bandet, Huntingate Investments	Private	Public	Public	37.77660	-122.25960	Harbor Master's Office	CCC
	15	Grand Marina	(510) 865-1200	Dean Anderson and Peter Wang	Private	Private	Public	37.77820	-122.25246	Harbor Master's Office	CCC
	16	Lake Chabot Marina	(510) 582-2198	California Parks Company	Public	Public	N/A	37.71742	-122.10433	Dock Entrance	KHM
	17	Lake Merritt Boating Center	(510) 238-2196	City of Oakland	Public	Public	N/A	37.80498	-122.25754	Dock Entrance	KHM
	18	Marina Village Yacht Harbor	(510) 521-0905	Vintage Properties	Public	Public	Public	37.78532	-122.26953	Harbor Master's Office	CCC
	19	Marinemax	(510) 535-6160	Publicly Traded Company (investors)	Private	Private	N/A	37.78696	-122.24970	Dock Entrance	KHM
	20	Mariner Square	(510) 521-2727	John Berry	Private	Private	Public	37.79142	-122.27650	Harbor Master's Office	CCC
	21	Oakland Yacht Club/Pacific Marina	(510) 522-6868	Oakland Yacht Club	Private	Private	N/A	37.78369	-122.26474	Harbor Master's Office	KHM
	22	Park Street Landing Marina	(510) 865-1200	Alan Wingate	Private	Private	Public	37.77196	-122.23837	Dock Entrance	KHM
	23	Port of Oakland	(510) 272-4800 (H)	Port of Oakland (operated by Almar Corp.)	Public	Public	Public	37.79370	-122.27504		CCC
	24	Portobello Marina/D Anna Yacht Ctr.	(510) 451-7000	Portobello Marine Association	Private	Public	Public	37.79099	-122.26453		CCC
	25	San Leandro Marina	(510) 357-7447	City of San Leandro	Public	Public	Public	37.69770	-122.19110	Harbor Master's Office	CCC
	26	Shadow Cliffs Regional Rec. Area	(925) 846-3000	East Bay Regional Park District	Public	Public	N/A	37.66838	-121.83845	Head of launch ramp	KHM
C	27	Brickyard Cove Marina	(510) 236-1933	Cove Investments	Private	Private	N/A	37.90941	-122.37808	Harbor Master's Office	CCC
O	28	Channel Marina	(510) 233-2246	Mike Desinoni	Private	Private	N/A	37.92522	-122.37020		Marina
N	29	Keefe Kaplan Maritime Inc. (KKMI)	(510) 235-5564	Paul Kaplan & Ken Keefe	Private	Private	N/A	37.92420	-122.37473		Marina
T	30	Marina Bay Yacht Harbor	(510) 236-1013	Warmington Homes	Private	Private	Public	37.91423	-122.35458	Head of launch ramp	CCC
R	31	Martinez Marina	(925) 313-0942	City of Martinez	Public	Public	Public	38.02599	-122.13741	Head of launch ramp	CCC
A	32	McAvoy Harbor	(925) 458-2568	Joyce Trost	Private	Private	N/A	38.03905	-121.96094	Harbor Master's Office	CCC
	33	Pittsburg Marina	(925) 439-4958	City of Pittsburg	Public	Public	Public	38.03217	-121.88330	Harbor Master's Office	Marina
C	34	Point San Pablo Yacht Harbor	(510) 233-3224	Fast Lane, Inc.	Private	Public	Public	37.93000	-122.41000	Harbor Master's Office	CCC
O	35	Richmond Yacht Club	(510) 237-2821	Corporation of the members of the Yacht Club	Private	Private	Private	37.91174	-122.37917	Harbor Master's Office	CCC
S	36	Richmond Yacht Harbor Ltd.	(510) 235-1176	Norma Simmons, Pres.	Private	Private	N/A	37.92522	-122.37059	Harbor Master's Office	CCC
T	37	Rodeo Marina	(510) 799-6644	Barbara Lighthill	Private	Private	N/A	38.03870	-122.27380	Head of launch ramp	CCC
A	38	Sugar Dock Marina	(510) 232-4282		Private	Private	N/A	37.92133	-122.37167		JP

	#	Facility	Total Marina Capacity			MSDs requiring pumpout			# of Transient Boats Requiring Pumpout (boats/yr)	est. # of Portable Toilets	# of Live Aboards at Marina	Onshore Restroom	Sewage Disposal Facilities			
			Permanent Slips	Size (Feet)		est. # Boats	Size (Feet)						Dump Station	Pumpouts		Sewage hookup**
				Min	Max		Min	Max						# of Stations	Mobile**	
A L M E D A C O U N T Y	1	Aeolian Yacht Club	93	25	50	86	25	50	Very Few	2	5	Yes	No	0		
	2	Alameda Marina	530	18	60	342	26	60	Few	30	7	Yes	No	0		
	3	Ballena Isle Marina	504	20	90	250	28	65	unk.	12	50	No	No	1	Service	
	4	Barnhill Marina	68	18	40	5	25	40	0	0	46	No	No	0		Yes
	5	Berkeley Marina	1,100	20	85	990	24	85	50	100	100	Yes	No	2		
	6	Berkeley Marine Center	60	20	50	30	20	45	250	20	0	Yes	No	Not Operational		
	7	Central Park/Lake Elizabeth	22	8	19	0			0	0	0	Yes	No	0		
	8	Del Valle Park Company	40	8	20	0			0	0	0	Yes	No	0		
	9	Embarcadero Cove Marina	120	24	62	105	24	62	Few	10	10	Yes	No	0		
	10	Emery Cove Yacht Harbor	430	30	60	408	30	60	400	20	28	Yes	No	2		
	11	Emeryville Marina	409	16	66	225	16	66	240	0	20	Yes	No	2		
	12	Encinal Yacht Club	0*			0			50	0	0	Yes	No	0		
	13	Fifth Avenue Marina	107	25	35	75	25	35	0	0	5	Yes	No	0		
	14	Fortman Marina	486	20	60	242	24	60	75	100	49	Yes	No	1		
	15	Grand Marina	400	25	90	350	25	90	120	Few	40	No	No	1		
	16	Lake Chabot Marina	40	10	20	0			0	0	0	Yes	No	0		
	17	Lake Merritt Boating Center	20	10	20	0			0	0	0	Yes	No	0		
	18	Marina Village Yacht Harbor	750	28	70	375	28	70	few	40	75	Yes	No	2		
	19	Marinemax	22	30	60	22	30	60	0	0	0	Yes (Private)	No	0		
	20	Mariner Square	50	30	130	38	30	65	few	0	5	Yes	No	1 (not installed yet)		
	21	Oakland Yacht Club/Pacific Marina	225	20	75	101	32	75	6	20	19	Yes	No	0		
	22	Park Street Landing Marina	25	30	63	25	30	63	few	0	2	No	No	1		
	23	Port of Oakland	500	20	110	300	25	110	75	80	8	Yes	No	3		
	24	Portobello Marina/D Anna Yacht Ctr.	65	28	140	35	28	140	0	0	3	Yes	No	1		
	25	San Leandro Marina	455	24	60	364	25	60	75	20	45	Yes	No	2		
	26	Shadow Cliffs Regional Rec. Area	20	14	17	0			0	0	0	Yes	No	0		
C O N T R A C T	27	Brickyard Cove Marina	250	28	60	225	28	60	0	0	12	Yes	No	0	Yes(on wheels)	
	28	Channel Marina	70	24	30	unk.	unk.	unk.	unk.	unk.	0	Yes	No	0		
	29	Keefe Kaplan Maritime Inc. (KKMI)	20	18	112	18	25	112	sales & service	2	0	Yes	No	0		
	30	Marina Bay Yacht Harbor	850	20	115	550	26	115	40/yr + BYC Marina	Few	75	Yes (3)	No	2		
	31	Martinez Marina	350	18	50	125	30	50	350	Few	35	Yes	No	1		
	32	McAvoy Harbor	300	20	50	unk.	unk.	unk.	Few	250	0	Yes	No	0		
	33	Pittsburg Marina	485	20	50	340	26	50	12	150	41	Yes	No	1		
	34	Point San Pablo Yacht Harbor	212	20	60	20	32	35	1	20	21	Yes	No	1		Yes
	35	Richmond Yacht Club	246	20	50	150	30	50	Few	50	4	Yes	No	1 (Private)		
	36	Richmond Yacht Harbor Ltd.	15	14	40	6	unk.	unk.	unk.	unk.	1	unk.	No	0		
	37	Rodeo Marina	18	14	25	0			0	0	0	No	No	0		
	38	Sugar Dock Marina	10	27	280	10	27	280	6	0	0	No	No	0		Yes

	#	Facility	Sewage Pumpout Features				Estimated Sewage Pumpout Costs			Boat Launch	Launch Rate (boats/year)	Fuel Dock
			Date Installed	Pumpout Capacity	Usage (boats/month)	Depth (Feet)	Installation	Disposal & Treatment	Maintenance			
ALAMEDA COUNTY	1	Aeolian Yacht Club							No		No	
	2	Alameda Marina							No		No	
	3	Ballena Isle Marina	1980	Adequate	unk.	9		\$1,000/yr	\$1,000/yr	No	Yes	
	4	Barnhill Marina								No	No	
	5	Berkeley Marina	2003/1980's	Adequate	15-20	13	DBW grant			1	4056/yr	Yes
	6	Berkeley Marine Center	Old	Not Operational	None					No		Yes
	7	Central Park/Lake Elizabeth								2	2000/yr	No
	8	Del Valle Park Company								1	8000/yr	No
	9	Embarcadero Cove Marina								No		No
	10	Emery Cove Yacht Harbor	2003	Adequate	100	9	30,000 (DBW grant)		\$15/month*	No		No
	11	Emeryville Marina	2003	Adequate	30-40	9	\$5,000-\$6,000 (DBW grant)			1	5000/yr	Yes
	12	Encinal Yacht Club								Hoist(Private)	N/A	No
	13	Fifth Avenue Marina								Hoist(Private)	N/A	No
	14	Fortman Marina	1997	Adequate	30-40	8	\$5,000 (DBW grant)		minimal	No		No
	15	Grand Marina	1990's	Adequate	150-300	10				No		No
	16	Lake Chabot Marina								1	350/yr	No
	17	Lake Merritt Boating Center								2	600/yr	No
	18	Marina Village Yacht Harbor	1985	Adequate	300-600	20 & 10				No		No
	19	Marinemax								1	350/yr	No
	20	Mariner Square	2003	Not in service yet	200	12	\$30,000			No		No
	21	Oakland Yacht Club/Pacific Marina								No		No
	22	Park Street Landing Marina	Old	Adequate	unk.	10				No		No
	23	Port of Oakland	unk.	unk.	unk.					No		Yes
	24	Portobello Marina/D Anna Yacht Ctr.	2000	Adequate	9	12			minimal	No		No
	25	San Leandro Marina	2000	Adequate	20	5.9*				1	1050/yr	Yes
	26	Shadow Cliffs Regional Rec. Area								1	1050/yr	No
CONTRA COSTA COUNTY	27	Brickyard Cove Marina							No		No	
	28	Channel Marina							No		Yes	
	29	Keefe Kaplan Maritime Inc. (KKMI)							Hoist	1000/yr	No	
	30	Marina Bay Yacht Harbor	2002	Adequate	15-20	20				1	240/yr	No
	31	Martinez Marina	2001	Adequate	85	6		\$100/yr	minimal	4	60/yr	Yes
	32	McAvoy Harbor								2	1200/yr	Yes
	33	Pittsburg Marina	1990's	Ok	25-50	unk.				1	Extensive Use	Yes
	34	Point San Pablo Yacht Harbor	1981	Adequate	Minimal	4			\$456/yr	No		No
	35	Richmond Yacht Club	Late 1980's	Adequate	1	6			\$200/month	No		No
	36	Richmond Yacht Harbor Ltd.								No		No
	37	Rodeo Marina								1 (private)	unk.	No
	38	Sugar Dock Marina								No		No

	#	Facility	Date of Phone Survey	Survey Respondent	Title	Comments
	1	Aeolian Yacht Club	1/22/04	Stan Zdral	Rear Commodore	
A	2	Alameda Marina	1/22/04	Wayne Milani	Harbormaster	
L	3	Ballena Isle Marina	11/25/03	Bill Chase/Janet Van Klo	Hbrmstr./Off. Man.	Most boaters voluntarily use Marine Sanitation Services (a mobile pumpout service).
A	4	Barnhill Marina	1/29/04	Tony Fraga & AV Barnhill	Harbormaster/Owner	42 floating homes & 22 boat berths. Floating homes each have tank & sewer ejector pump.
M	5	Berkeley Marina	12/1/03	Ann Hardinger	Harbormaster	Plans to upgrade older pumout. Boat launch-high use (close to live bait receiver).
E	6	Berkeley Marine Center	11/25/03	Julie Partridge	Vice President	Rents 60 berths to sailing club & does maintenance. Use pumpout at Berkeley Marina.
D	7	Central Park/Lake Elizabeth	1/22/04	Sue Nogare & Laurie Sto	Off. Man./Park Ranger	Non-motorized small boats only. Open weekends & day use only (Apr.-Oct.)(12pm-5pm).
A	8	Del Valle Park Company	1/19/04	Mike Gillaspie	Park Ranger	No overnight boating on reservoir. Rentals (aluminum boats & paddle boats).
	9	Embarcadero Cove Marina	1/22/04	Richard Hilken & Mark Fr	Bookkeeper/Hbrmstr	
C	10	Emery Cove Yacht Harbor	12/1/03	Diane Isley	Harbormaster	*Cost of maintenance on pumpout was \$200-250month prior to installing new pumpouts
O	11	Emeryville Marina	12/1/03	Javier Martinez	Harbormaster	
U	12	Encinal Yacht Club	2/2/04	Chuck Wetteroth	Port Captain	*No permanent berths, just fingers for temporary member use (About 50 boats/year).
N	13	Fifth Avenue Marina	2/25/04	Viginia Tracy	Manager	Hoist is for tenants only.
T	14	Fortman Marina	12/2/03	Mark Ruckman	Harbormaster	
Y	15	Grand Marina	12/1/03	Chrissie Prentiss	Office Manager	
	16	Lake Chabot Marina	1/28/04	Nathan Senti	Assistant Manger	No motorized boats. Only small boats allowed on lake. Berths just used for rental boats.
	17	Lake Merritt Boating Center	1/21/04	Erin Hestir	Asst. Aq. Prog. Coord.	Berths just used for rental boats (sail boats, paddle boats, & kayaks).
	18	Marina Village Yacht Harbor	12/1/03	Dave Merrick	Dockmaster	
	19	Marinemax	1/28/04	Rinehart Boost	Manager	Sales and service only. *Some live-aboards for short amounts of time.
	20	Mariner Square	1/22/04	Michelle Klein	Office Assistant	6 large dinner boats (30'-130' are also tied up to the marina).
	21	Oakland Yacht Club/Pacific Marina	1/22/04	Wayne Clough	Harbormaster	
	22	Park Street Landing Marina	3/8/04	Chrissie Prentiss	Office Manger	
	23	Port of Oakland	3/12/04	Debbie Gott	Harbormaster	New management in Jan '04. The 3 pumpouts: Jack London Sq., Union Pt., & N. Basin.
	24	Portobello Marina/D Anna Yacht Ctr.	2/2/04	Marcel Dawson	Service Manger	Pumpout hard to get to (only used 2 times/week)
	25	San Leandro Marina	1/28/04	Delmarie Snodgrass	Marina Manager	*Pumout will be dredged to 8 feet in 2005
	26	Shadow Cliffs Regional Rec. Area	2/19/04	Joyce Reid	Park Ranger	Berths for rentals only. Small trailerable boats are allowed to use launch ramp & lake.
C	27	Brickyard Cove Marina	1/28/04	declined to state		Portable pumout unit on wheels for their tenants. Tenants use pumpout at nearby marinas.
O	28	Channel Marina	1/28/04	Armando Romero	Harbormaster	Primarily Fishing Vessels.
N	29	Keefe Kaplan Maritime Inc. (KKMI)	3/9/04	Ken Keefe	Owner	Sales and Service only. Occassionally people stay on their vessel while it is repaired.
T	30	Marina Bay Yacht Harbor	11/25/03	Jim Walter	Harbormaster	Private facility, but pumpout is open to general public (lots of boats from Brickyard Cove).
R	31	Martinez Marina	11/25/03	John Demeter, Gary Jeni	Harbormaster/Staff	Boat Launch areas are heavily used at times by fishing boats.
A	32	McAvoy Harbor	1/28/04	Cherise Chavex	Harbormaster	Marina has mostly older boats used by fishermen.
	33	Pittsburg Marina	12/2/03	Vita Collaco	Admistrative Asst.	Could use one more pumpout for convenience (1 for each basin).
C	34	Point San Pablo Yacht Harbor	12/2/03	Roslynn Johnson	Chief Financial Officer	Pumpout is rarely used. Most boaters are hooked up to a sewage treatment system.
O	35	Richmond Yacht Club	3/9/04	Rich Weirick	Harbormaster	
S	36	Richmond Yacht Harbor Ltd.	Declined	Norma Simmons	Owner	Declined survey. Marina has approx. 2 @ 14', 6 w/ SRD and at least 1 live aboard.
T	37	Rodeo Marina	3/25/04	Mel Decker	Harbormaster	This marina is really not open to the public as it has not been dredged in many years.
A	38	Sugar Dock Marina	3/25/04	Grace Bodle	Owner	Each pier has a station and hose that is hooked up to the sewer system

	#	Facility	Address	Mailing Address (if different)	City	Zip Code	Body of Water
	39	145 Marina	145 Third Street		San Rafael	94901	San Rafael Canal
	40	American Oceanics	60 Bay Street		San Rafael	94966	SF North Bay
	41	Angel Island State Park	Ayala Cove, Angel Island	P.O. Box 318	Tiburon	94920	SF North Bay
M	42	Arques Shipyard and Marina	2350 Marinship Way		Sausalito	94965	Richardson Bay
A	43	Bel Marin Keys Yacht Club	4 Montego Key		Novato	94949	Novato Creek & 2 lagoons
R	44	Bolinas Rod & Boat Club	83 Wharf Road	P.O. Box 376	Bolinas	94924	Bolinas Lagoon
I	45	Cass Marina	1702 Bridgeway		Sausalito	94965	Richardson Bay
N	46	Clipper Yacht Harbor	310 Harbor Drive		Sausalito	94965	Richardson Bay
	47	Corinthian Yacht Club	43 Main Street		Tiburon	94920	Richardson Bay
C	48	Dolphin Marin and Lofts	135 Third Street		San Rafael	94901	SF North Bay
O	49	Galilee Harbor	300 Napa Street		Sausalito	94965	Richardson Bay
U	50	Hi Tide Boat Sales & Services	620 Canal Street		San Rafael	94901	SF North Bay
N	51	Liberty Ship Marina	41 Liberty Ship Way		Sausalito	94965	Richardson Bay
T	52	Loch Lomond Marina	110 Loch Lomond Drive		San Rafael	94901	SF North Bay
Y	53	Lowrie Yacht Harbor	40 Pt. San Pedro Road		San Rafael	94901	SF North Bay
	54	Marin Boat House	115 Third Street		San Rafael	94901	San Rafael Canal
	55	Marin Yacht Club	24 Summit Avenue		San Rafael	94901	San Rafael Canal
	56	Marina Plaza Harbor	2320 Marinship Way		Sausalito	94965	Richardson Bay
	57	Paradise Cay Yacht Harbor	101 Trinidad Drive		Tiburon	94520	SF North Bay
	58	Pelican Harbor	200 Johnson	P.O. Box 495, Sausalito 94965	Sausalito	94966	Richardson Bay
	59	Richardson Bay Marina	100 Gate Six Road		Sausalito	94965	Richardson Bay
	60	San Francisco Yacht Club	98 Beach Road		Belvedere	94920	Rich. Bay-Belvedere Cv.
	61	San Rafael Yacht Club	200 Yacht Club Drive		San Rafael	94901	San Rafael Canal
	62	San Rafael Yacht Harbor	557 Francisco Boulevard		San Rafael	94901	San Rafael Canal
	63	Sausalito Marine	225 Locust Street		Sausalito	94965	Richardson Bay
	64	Sausalito Yacht Harbor	501 Humboldt "Lower" Street		Sausalito	94965	Richardson Bay
	65	Schoonmaker Point Marina	85 Liberty Ship Way #205		Sausalito	94965	Richardson Bay
	66	Shelter Cove Marina	2304 Shelter Bay Ave.		Mill Valley	94941	Richardson Bay
	67	The Cove Apartments & Marina	50 Barbaree Way		Tiburon	94920	Richardson Bay
	68	Trade Winds Marina	55 Harbor Street		San Rafael	94901	SF North Bay
	69	Travis Marina	Building. 679 East Fort Baker	P.O. Box 2726, Sausalito CA 94566	Sausalito	94965	SF Bay (Horseshoe Bay)
N	70	Napa Valley Marina	1200 Milton Road		Napa	94559	Napa River
A	71	Napa Yacht Club	N. Newport Drive		Napa	94559	Napa River
	72	Fisherman's Wharf & Hyde St. Harbor	SF Waterfront by Jefferson, Taylor, & Hyde St	Port of SF Pier 1 (Attn: Fisherman's Wharf)	San Francisco	94123	SF West Bay
	73	Mission Creek Harbor	300 Channel Street		San Francisco	94107	China Basin
S	74	Pier 39 Marina	Beach & Embarcadero	P.O. Box 193730, SF, CA 94119	San Francisco	94133	San Francisco Bay
F	75	San Francisco Marina East Harbor	10 Marina Blvd.	3950 Scott Street	San Francisco	94123	San Francisco Bay
	76	San Francisco Marina West Harbor	3950 Scott Street		San Francisco	94123	San Francisco Bay
	77	South Beach Harbor	Pier 40, The Embarcadero		San Francisco	94107	SF West Bay
	78	Treasure Island Marina	1 Clipper Cove Way, Treasure Island	1 Clipper Cove Way	San Francisco	94130	SF West Bay

	#	Facility	Phone Number	Name(s) of Owner(s)	Private or Public			Degrees Latitude (North)	Degrees Longitude (West)	Location of GPS Coordinates	GPS Source
					Owned	Operated	Sewage Pumpout				
M A R I N C O U N T Y	39	145 Marina	(415) 454-3522	Blazen trust	Private	Private	N/A	37.96918	-122.51266	Head of launch ramp	CCC
	40	American Oceanics	(415) 331-6333	Wayne Cina	Private	Private	N/A	37.97000	-122.51000	Harbor Master's Office	CCC
	41	Angel Island State Park	(415) 435-2055	CA Department of Parks and Recreation	Public	Public	N/A	37.86902	-122.43339		CCC
	42	Arques Shipyard and Marina	(415) 332-3552	Arques Shipyard Mgmt. & Maritime Pres. Fdn.	Private	Private	N/A	37.86750	-122.49717	Dock	JP
	43	Bel Marin Keys Yacht Club	(415) 883-3436	Members of the Yacht Club	Private	Private	N/A				CCC
	44	Bolinas Rod & Boat Club	(415) 868-2194	Bolinas Rod & Boat Club	Private	Private	N/A	37.91021	-122.68199	Harbor Master's Office	CCC
	45	Cass Marina	(415) 332-6789	Lois Keating-Fisher	Private	Public	N/A	37.86183	-122.48833	Office/Dock	JP
	46	Clipper Yacht Harbor	(415) 332-3500	Clifford Petersen	Private	Private	Public	37.86883	-122.49783	Office/Dock	JP
	47	Corinthian Yacht Club	(415) 435-4771	Corinthian Yacht Club of San Francisco	Private	Private	N/A	37.87187	-122.45602	Harbor Master's Office	CCC
	48	Dolphin Marin and Lofts	(415) 785-4848	Berjog Properties	Private	Private	N/A	37.97000	-122.51240	Harbor Master's Office	CCC
	49	Galilee Harbor	(415) 332-4906	Galilee Harbor Community Assoc. Inc.	Private	Private	N/A	37.86254	-122.48814	Harbor Master's Office	CCC
	50	Hi Tide Boat Sales & Services	(415) 459-0254	Anthony A. Caballo	Private	Private	N/A	37.96733	-122.51233	Office	JP
	51	Liberty Ship Marina	(415) 331-5020		Private	Private	N/A				CCC
	52	Loch Lomond Marina	(415) 454-7228	Oaktree Capital Management	Private	Public	Public	37.97334	-122.48248	Harbor Master's Office	CCC
	53	Lowrie Yacht Harbor	(415) 454-7595	Bud R. Lowrie	Private	Public	N/A	37.96783	-122.50867	Dock/Office	JP
	54	Marin Boat House	(415) 454-1600	Hart Estates Investment Co.	Private	Private	N/A	37.97000	-122.51183	Dock	CCC
	55	Marin Yacht Club	(415) 453-9366	Marin Yacht Club Members	Private	Private	Public	37.97333	-122.49733	At Locked Gate	JP
	56	Marina Plaza Harbor	(415) 332-4723	Berg Holdings	Private	Private	Public	37.86650	-122.49550	Office/Dock	JP
	57	Paradise Cay Yacht Harbor	(415) 435-1652	Tom Mosely (Managed by Anchor Realty)	Private	Private	Private	37.90967	-122.47633	From Office	JP
58	Pelican Harbor	(415) 332-0723	Flynn Investments, San Francisco	Private	Private	N/A	37.86050	-122.48367	Office/Dock	JP	
59	Richardson Bay Marina	(415) 332-5510	Steckler Pacific Company Inc.	Private	Private	Public	37.87567	-122.50550	Office	JP	
60	San Francisco Yacht Club	(415) 435-4202	San Francisco Yacht Club Members	Private	Private	N/A	37.87267	-122.46350	Clubhouse	JP	
61	San Rafael Yacht Club	(415) 454-4461	San Rafael Yacht Club Members	Private	Private	N/A	37.96600	-122.51483	Dock	JP	
62	San Rafael Yacht Harbor	(415) 456-1600	Matt Butler	Private	Private	N/A	37.97000	-122.51267	Head of Hoist	CCC	
63	Sausalito Marine	(415) 332-3100	Zack's Inc.	Private	Private	N/A	37.86081	-122.48483	Harbor Master's Office	CCC	
64	Sausalito Yacht Harbor	(415) 332-5000	Sausalito Yacht Harbor			N/A	37.85900	-122.48367	Office	JP	
65	Schoonmaker Point Marina	(415) 331-5550	Craig Dorsey, Walter Crump, & Sidney Hindrick	Private	Private	Public	37.86383	-122.49183	Office/Dock	JP	
66	Shelter Cove Marina	(415) 381-2466		Private	Private	N/A					
67	The Cove Apartments & Marina	(415) 388-4646	Sequoia Equities	Private	Private	N/A				CCC	
68	Trade Winds Marina	(415) 686-0422	Judi and Peter Pelz	Private	Private	N/A	37.96697	-122.51208	Harbor Master's Office	CCC	
69	Travis Marina	(415) 332-2319	Travis AFB and Golden Gate Park Service	Public	Public	N/A	37.83267		Dock	JP	
N A	70	Napa Valley Marina	(707) 252-8011	Tom and Dan Giovannoni	Private	Public	Public	38.21982	-122.31309	Dock Entrance	KHM
	71	Napa Yacht Club	(707) 224-8281	Lyon Commnunities Inc. & The O'Brien Group	Private	Private	N/A				CCC
S F	72	Fisherman's Wharf & Hyde St. Harbor	(415) 274-0658	City and County of San Francisco	Public	Public	Public	37.81000	-122.42000	Harbor Master's Office	CCC
	73	Mission Creek Harbor	(415) 273-1767	Port of SF	Private	Private	N/A				CCC
	74	Pier 39 Marina	(415) 705-5556	Pier 39 Limited Partners	Private	Public	Public	37.81083	-122.40967	Harbor Master's Office	CCC
	75	San Francisco Marina East Harbor	(415) 567-3965	City and County of San Francisco	Public	Public	Public	37.80733	-122.43583	Dock Entrance	JP
	76	San Francisco Marina West Harbor	(415) 292-2013	City and County of San Francisco	Public	Public	Public	37.80667	-122.44283	Harbor Master's Office	JP
	77	South Beach Harbor	(415) 495-4911	San Francisco Redevelopment Agency	Public	Public	Public	37.78149	-122.38742	North Entrance	CCC
	78	Treasure Island Marina	(415) 981-2416	City of SF (Operated by Almar Mgmt.)	Private	Private	N/A	37.82000	-122.37021	Harbor Master's Office	CCC

	#	Facility	Total Marina Capacity			MSDs requiring pumpout			# of Transient Boats Requiring Pumpout (boats/yr)	est. # of Portable Toilets	# of Live Aboards at Marina	Onshore Restroom	Sewage Disposal Facilities			
			Permanent Slips	Size (Feet)		est. # Boats	Size (Feet)						Dump Station	Pumpouts		Sewage hookup**
				Min	Max		Min	Max						# of Stations	Mobile**	
M A R I N C O U N T Y	39	145 Marina	10	20	30	unk.	unk.	unk.	0	unk.	0	No	No	0		
	40	American Oceanics	16	16	70	0			0	1	0	Yes	No	0		
	41	Angel Island State Park	2*	48	56	0	48	56	1300	unk.	0	Yes	No	0		
	42	Arques Shipyard and Marina	89	25	50	13	25	50	0	0	8	Yes	No	0	MT Head	
	43	Bel Marin Keys Yacht Club	63	12	48	unk.	unk.	unk.	0	Some	unk.	No	No	0		
	44	Bolinas Rod & Boat Club	40	17	21	0			0	0	0	Yes	No	0		
	45	Cass Marina	30	22	35	5	30	35	0	20	0	Yes	No	0	MT Head	
	46	Clipper Yacht Harbor	600	20	60	575	25	60	75	<i>Few</i>	50	Yes	Yes	1		
	47	Corinthian Yacht Club	93	25	50	70	25	50	60	0	0	Yes	No	0		
	48	Dolphin Marin and Lofts	5	30	50	5	30	50	0	0	3	No	No	0		
	49	Galilee Harbor	38	24	66	9	24	66	0	20	38	Yes	No	1 (not installed yet)	MT Head	Yes
	50	Hi Tide Boat Sales & Services	10	15	30	0			0	0	0	Yes (private)	No	0		
	51	Liberty Ship Marina	54	30	80	45	30	80	0	0	0	Yes	No	0		
	52	Loch Lomond Marina	518	20	62	400	28	62	100	80	52	Yes	Yes	3		
	53	Lowrie Yacht Harbor	110	25	65	55	35	65	36	12	few	Yes	No	0		
	54	Marin Boat House	12	14	40	unk.	unk.	unk.	unk.	0	Maybe	Yes	No	0		
	55	Marin Yacht Club	118	36	80	118	36	80	240	0	0	Yes	No	1		
	56	Marina Plaza Harbor	103	8	80	90	25	80	4	<i>Few</i>	0	No	No	2	MT Head	
	57	Paradise Cay Yacht Harbor	163	15	50	50	25	50	30	<i>some</i>	0	Yes	No	2 (Private)		
58	Pelican Harbor	90	30	80	90	30	80	0	0	9	Yes	No	0			
59	Richardson Bay Marina	220	26	36	165	26	36	0	<i>Few</i>	22	No	No	1	MT Head		
60	San Francisco Yacht Club	187	25	53	47	25	53	Some	unk.	0	Yes	No	0			
61	San Rafael Yacht Club	18*	14	30	0			400	unk.	0	Yes	No	0			
62	San Rafael Yacht Harbor	140	20	55	70	30	55	0	30	40	Yes	Yes	0	San O'Save		
63	Sausalito Marine	60	28	50	30	28	50	0	0	<i>Few</i>	Yes	No	0			
64	Sausalito Yacht Harbor	580	unk.	unk.	250	unk.	unk.	unk.	<i>Some</i>	unk.	unk.	unk.	unk.	unk.		
65	Schoonmaker Point Marina	161	35	70	125	35	70	360	0	12	Yes	No	2			
66	Shelter Cove Marina	17	30	unk.	unk.	unk.	unk.	unk.	unk.	unk.	unk.	unk.	unk.	unk.		
67	The Cove Apartments & Marina	55	10	50	10	25	50	0	3	0	No	No	0			
68	Trade Winds Marina	30	26	40	20	26	40	0	Some	12	Yes	No	0			
69	Travis Marina	81	20	42	20	30	42	360	20	5	Yes	No	0			
N A P A	70	Napa Valley Marina	200	14	55	150	25	55	60	10	7	Yes	No	1		
	71	Napa Yacht Club	unk.	unk.	unk.	unk.	unk.	unk.	unk.	unk.	unk.	N/A	No	0		
S F I S C O	72	Fisherman's Wharf & Hyde St. Harbor	180	16	100	20	45	90	150	25	seasonal	No	No	1	Yes	
	73	Mission Creek Harbor	55	25	55	12	25	55	0	<i>Few</i>	20	Yes	No	0		
	74	Pier 39 Marina	310	19	60	295	23	60	3500	15	30	Yes	No	1		
	75	San Francisco Marina East Harbor	342	20	35	103	25	35	0	100	0	Yes	No	1		
	76	San Francisco Marina West Harbor	344	20	90	240	25	90	200	100	0	Yes	No	1		
	77	South Beach Harbor	700	26	150	490	26	150	1100	35	0	Yes	No	2		
	78	Treasure Island Marina	100	18	49	65	30	45	150	<i>Few</i>	3	Yes	No	0		

	#	Facility	Sewage Pumpout Features				Estimated Sewage Pumpout Costs			Boat Launch	Launch Rate (boats/year)	Fuel Dock
			Date Installed	Pumpout Capacity	Usage (boats/month)	Depth (Feet)	Installation	Disposal & Treatment	Maintenance			
M A R I N C O U N T Y	39	145 Marina								1	?	No
	40	American Oceanics								No		No
	41	Angel Island State Park								No		No
	42	Arques Shipyard and Marina								No		No
	43	Bel Marin Keys Yacht Club								No		No
	44	Bolinas Rod & Boat Club								No		No
	45	Cass Marina								No		No
	46	Clipper Yacht Harbor	1998	Adequate	unk.	9				2	500/yr	Yes
	47	Corinthian Yacht Club								Hoist	300/yr	No
	48	Dolphin Marin and Lofts								No		No
	49	Galilee Harbor	2004	unk.	unk.	7	\$12,000 (DBW grant)			No		No
	50	Hi Tide Boat Sales & Services								Hoist	780/yr	No
	51	Liberty Ship Marina								Hoist	Rarely	No
	52	Loch Lomond Marina	1999	Adequate	100	8	DBW grant		\$300-\$500/yr	1	2064/yr	Yes
	53	Lowrie Yacht Harbor								No		No
	54	Marin Boat House								No		No
	55	Marin Yacht Club	Late 1980's	Adequate	40	8				Hoist	occasionally	No
	56	Marina Plaza Harbor	2002	Adequate	30	8 & 10	DBW grant			No		No
	57	Paradise Cay Yacht Harbor	1990's	Adequate	Rarely					No		No
58	Pelican Harbor								No		No	
59	Richardson Bay Marina	1985	Udgrading soon	unk.	9.5	\$15,000 to replace			No		No	
60	San Francisco Yacht Club								No		No	
61	San Rafael Yacht Club								No		No	
62	San Rafael Yacht Harbor								No		No	
63	Sausalito Marine	N/A	N/A	N/A	N/A				No		No	
64	Sausalito Yacht Harbor								unk.	unk.	unk.	
65	Schoonmaker Point Marina	1980's	Adequate	15	15				Hoist	120/yr	No	
66	Shelter Cove Marina											
67	The Cove Apartments & Marina								No		No	
68	Trade Winds Marina								No		No	
69	Travis Marina								No		No	
N A	70	Napa Valley Marina	2002	Adequate	20	15				1 (tenants)	30/yr	Yes
	71	Napa Yacht Club								No		No
S F	72	Fisherman's Wharf & Hyde St. Harbor	2001	Adequate	13	14				No		Yes
	73	Mission Creek Harbor								No		No
	74	Pier 39 Marina	2003	Adequate	60	9	\$12,000 (DBW grant)			No		No
	75	San Francisco Marina East Harbor	1999	Adequate	90	8			\$1000/yr	No		Yes
	76	San Francisco Marina West Harbor	1999	Adequate	50	12			\$1000/yr	No		No
	77	South Beach Harbor	1986 (replacing)	Adequate	195	14	\$40,000 for 4 (DBW grant)		\$500-\$1000/yr	No		No
	78	Treasure Island Marina								No		No

	#	Facility	Date of Phone Survey	Survey Respondent	Title	Comments
	39	145 Marina	3/25/04	Christy Quigley	Sales	Marina in association with repair yard
	40	American Oceanics	3/30/04	Wayne Circa	Owner	Marine Salvage
	41	Angel Island State Park	2/25/04	Allyn Schafer	Boat Operator	* Many temporary births: 7 day max (ave. weekend 50 boats). Used to have a pumpout.
M	42	Arques Shipyard and Marina	2/20/04	Victor Nakamura	Harbormaster	All tenants with holding tanks are required to pay for the services of MT Head.
A	43	Bel Marin Keys Yacht Club	3/17/04	Ron Viner	Port Captain	703 homes w/ individual docks on the water. Most residents don't belong to the Yacht Club.
R	44	Bolinas Rod & Boat Club	3/26/04	Peter Smith	President	Club for sport fisherman.
I	45	Cass Marina	2/20/04	Lois Keating-Fisher	President	Needs to dredge before installing pumpout. Marina over pays for MT Head service.
N	46	Clipper Yacht Harbor	2/26/04	Eva Kanemoto	Office Manager	
	47	Corinthian Yacht Club	2/20/04	Frances Ramage	Office Manager	
C	48	Dolphin Marin and Lofts	3/25/04		Manager	Manager requests not to be included in public listings
O	49	Galilee Harbor	3/25/04	Bob Boye	Harbormaster	All liveaboards -sewer hose at each berth, MT Head services, & installing pumpout soon.
U	50	Hi Tide Boat Sales & Services	2/23/04	Anthony Caballo	Proprietor	This is a facility that sells new boats and services Mercury powered boats only.
N	51	Liberty Ship Marina	3/25/04	chuch Von Schalscha	Yacht Sales	This is a commercial business (brokerage).
T	52	Loch Lomond Marina	2/25/04	Pat Lopez	Harbormaster	
Y	53	Lowrie Yacht Harbor	2/23/04	Roger Preston	General Manager	
	54	Marin Boat House	3/25/04	James Schultz	Employee	Marina is down for repairs. Answers are based on anticipated service.
	55	Marin Yacht Club	2/26/04	Wyn Hughes	Harbormaster	
	56	Marina Plaza Harbor	2/26/04	Alan Maciel		MT Head also services some vessels. Sailing school included in the total number of berths.
	57	Paradise Cay Yacht Harbor	3/21/04	Jeff Mosely	Owner's son	
	58	Pelican Harbor	2/26/04	Tony Marciante	Harbormaster	
	59	Richardson Bay Marina	2/20/04	Ken Watsey	Manager	MT Head contract required for live aboards. Formerly Kappa's Marina.
	60	San Francisco Yacht Club	2/26/04	Jerry Fisher	Harbormaster	
	61	San Rafael Yacht Club	3/19/04	Richard Lockman	YRA Chairman	* Marina has many temporary docks, with around 400 vessel visits/year.
	62	San Rafael Yacht Harbor	2/23/04	Matt Butler	Harbormaster	Marina uses San O'Save (a mobile pumpout vessel) once/month.
	63	Sausalito Marine	3/26/04	Jackie Hamilton	Bookkeeper	
	64	Sausalito Yacht Harbor	Declined	Mike Madden	Harbormaster	Declined survey.
	65	Schoonmaker Point Marina	2/23/04	Temple Stuart	Asst. Harbormaster	Hoist is used primarily during races.
	66	Shelter Cove Marina				Residential Marina
	67	The Cove Apartments & Marina	3/19/04	Andrea Meadows	Community Consultant	
	68	Trade Winds Marina	3/25/04	Peter Pelz	Harbormaster	
	69	Travis Marina	2/23/04	Gary Howell	Manger	
N	70	Napa Valley Marina	2/20/04	Dana Newton	Asst Marina Developer	
A	71	Napa Yacht Club	3/19/04	Jocelyne Monello	Realtor	This is a gated community with individual homes, docks, and boats.
	72	Fisherman's Wharf & Hyde St. Harbor	2/20/04	Hedley Prince	Wharfinger	In addition to the pumpout facility the harbor has a mobile boat.
	73	Mission Creek Harbor	4/2/04	Bob Mayes	Assc. Steering Comm.	20 houseboats and 35 boats.
S	74	Pier 39 Marina	12/3/03	Ron Hanhy	Property Manager	Transient vessels rarely use pumpout.
F	75	San Francisco Marina East Harbor	2/20/04	Brad Gross	Harbormaster	Formerly called Gas House Cove.
	76	San Francisco Marina West Harbor	2/20/04	Brad Gross	Harbormaster	
	77	South Beach Harbor	12/2/03	James Nybakken	Harbormaster	Replacing 2 existing pumpouts and installing 2 additional pumpouts (total of 4 pumpouts).
	78	Treasure Island Marina	2/20/04	Sandie Cartwright	Marina Manager	Many boats come into the cove to anchor, but not the marina (20-30 boats/wk in summer).

	#	Facility	Address	Mailing Address (if different)	City	Zip Code	Body of Water
S	79	Bair Island Marina	702 Bair Island Road		Redwood City	94063	SF West Bay, Redwood Cr.
A	80	Brisbane Marina	Sierra Point Parkway	400 Marina Blvd.	Brisbane	94005	SF West Bay
N	81	Coyote Point Marina	1900 Coyote Point Drive		San Mateo	94401	SF South Bay
	82	Docktown Marina	1548 Maple Street		Redwood City	94063	SF South Bay
M	83	Marine Collection LLC	671 Marina Boulevard		South San Francisco	94080	SF South Bay
A	84	Oyster Cove Marina	385 Oyster Point Boulevard, Suite 8A		South San Francisco	94080	SF South Bay
T	85	Oyster Point Marina	95 Harbor Master Road, #1		South San Francisco	94080	SF South Bay
E	86	Pete's Harbor	No. 1 Uccelli Boulevard		Redwood City	94063	Smith's Slough
O	87	Pillar Point Harbor	1 Johnson Pier		Half Moon Bay	94019	Half Moon Bay
	88	Port of Redwood City Yacht Harbor	451 Seaport Court		Redwood City	94063	SF West Bay
S	89	South Bay Yacht Club	1491 Hope		Alviso	95002	SF South Bay
C	80	Vasona Lake	333 Blossom Hill Road	298 Garden Hill Road	Los Gatos	95032	Vasona Lake
	91	Velma Million Marina	2305 S. White Road		San Jose	95148	Lake Cunningham
	92	Benicia Marina	266 East B Street		Benicia	94510	Carquinez Strait
S	93	Glen Cove Marina	2000 Glen Cove Road		Vallejo	94591	Carquinez Strait
O	94	Suisun City Marina	800 Kellogg Street		Suisun City	94585	Suisun Bay/Grizzly Bay
L	95	Vallejo Marina	42 Harbor Way		Vallejo	94590	Mare Island Strait
	96	Vallejo Yacht Club	485 Mare Island Way		Vallejo	94590	Mare Island Strait
S	97	Gilardi's Lakeville Marina	5684 Lakeville Highway		Petaluma	94954	Petaluma River
O	98	Petaluma Marina	781 Baywood Drive		Petaluma	94954	Petaluma River
N	99	Port of Sonoma Marina	270 Sears Point Road		Petaluma	94952	Petaluma River

	#	Facility	Phone Number	Name(s) of Owner(s)	Private or Public			Degrees Latitude (North)	Degrees Longitude (West)	Location of GPS Coordinates	GPS Source
					Owned	Operated	Sewage Pumpout				
S	79	Bair Island Marina	(650) 701-0382	Irwin Properties	Private	Public	N/A	37.49858	-122.22097		Marina
A	80	Brisbane Marina	(650) 583-6975	City of Brisbane	Public	Public	Public	37.67454	-122.38096	Harbor Master's Office	RB2
N	81	Coyote Point Marina	(650) 573-2594	County of San Mateo	Public	Public	Public	37.59088	-122.31861	Harbor Master's Office	CCC
	82	Docktown Marina	(650) 365-3258	Fred Barnhart	Private	Private	N/A	37.49583	-122.22050	Launch Ramp	JP
M	83	Marine Collection LLC	(650) 872-0795	King Ventures	Private	Private	Private	37.66282	-122.37928	Harbor Master's Office	CCC
A	84	Oyster Cove Marina	(650) 925-5540	Sheltan International	Private	Private	Public	37.66627	-122.38549	Harbor Master's Office	CCC
T	85	Oyster Point Marina	(650) 952-0808	City of South San Francisco	Public	Public	Public	37.66257	-122.37495	Head of Launch Ramp	CCC
E	86	Pete's Harbor	(650) 366-0922	Peter Uccelli	Private	Private	N/A	37.50167	-122.22500	Harbor Master's Office	CCC
O	87	Pillar Point Harbor	(650) 726-4723	San Mateo County Harbor District	Public	Public	Public	37.50313	-122.48267	Harbor Master's Office	CCC
	88	Port of Redwood City Yacht Harbor	(650) 363-1390	City of Redwood City	Public	Public	Public	37.50317	-122.21317	Dock D	JP
S	89	South Bay Yacht Club	(408) 263-0100	Members of the Yacht Club	Private	Private	N/A	37.42683	-121.97917	Club Office	JP
C	80	Vasona Lake	(408) 356-2729	Santa Clara County Parks & Rec. Dept.	Public	Public	N/A	37.24167	-121.97000	Boat Launch	JP
	91	Velma Million Marina	(408) 277-4792	City of San Jose	Public	Public	N/A	37.33500	-121.80967	Office/Dock	JP
	92	Benicia Marina	(707) 745-2628	Benicia Harbor Corporation	Private	Public	Public	38.05810	-122.17438	Fuel Dock	CCC
S	93	Glen Cove Marina	(707) 552-3236	Friendly Harbors	Private	Private	Public	38.06767	-122.21357	Dock Entrance	KHM
O	94	Suisun City Marina	(707) 429-BOAT	City of Suisun City	Public	Public	Public	38.23449	-122.03800	By Pumpout & Fuel Dock	KHM
L	95	Vallejo Marina	(707) 648-4370	City of Vallejo	Public	Public	Public	38.10885	-122.26722		CCC
	96	Vallejo Yacht Club	(707) 643-1254	Club Members	Private	Public	N/A	38.10512	-122.26633	Dock Entrance	KHM
S	97	Gilardi's Lakeville Marina	(707) 763-7555	Russ Gilardi	Private	Public	N/A	38.19751	-122.54754	Dock Entrance	KHM
O	98	Petaluma Marina	(707) 778-4489	City of Petaluma	Public	Public	Public	38.23138	-122.61485	Launch Ramp	KHM
N	99	Port of Sonoma Marina	(707) 778-8055	Port Sonoma Associates LLC	Private	Private	Public	38.11637	-122.50353	Dock by Bait Shop	KHM

	#	Facility	Total Marina Capacity			MSDs requiring pumpout			# of Transient Boats Requiring Pumpout (boats/yr)	est. # of Portable Toilets	# of Live Aboards at Marina	Onshore Restroom	Sewage Disposal Facilities			
			Permanent Slips	Size (Feet)		est. # Boats	Size (Feet)						Dump Station	Pumpouts		Sewage hookup**
				Min	Max		Min	Max						# of Stations	Mobile**	
S	79	Bair Island Marina	95	30	70	90	30	70	12	5	0	Yes	No	0		
A	80	Brisbane Marina	580	22	100	568	28	100	100	11	0	Yes	No	1		
N	81	Coyote Point Marina	550	22	65	350	28	65	100	100	0	Yes	No	1		
	82	Docktown Marina	152	32	50	90	32	50	0	0	65	Yes	Yes	0	Yes(tenants)	
M	83	Marine Collection LLC	20	20	40	6	30	40	Few	0	1	Yes (private)	No	1 (Private)		
A	84	Oyster Cove Marina	237	30	60	110	30	40	0	0	23	Yes	No	1	Yes	
T	85	Oyster Point Marina	592	26	60	60	26	60	25	10	60	Yes	No	1		
E	86	Pete's Harbor	263	20	105	93	32	105	unk.	30	40	Yes	No	0	MT Head	
O	87	Pillar Point Harbor	371	30	65	223	30	65	500	74	37	No	No	1	Yes	
	88	Port of Redwood City Yacht Harbor	185	15	65	140	25	65	75	40	0	Yes	No	1		
S	89	South Bay Yacht Club	15	20	34	2	25	34	0	0	0	Yes	No	0		
C	80	Vasona Lake	40	10	20	0			0	0	0	Yes	No	0		
	91	Velma Million Marina	22	6	14	0			0	0	0	Yes	No	0		
	92	Benicia Marina	320	25	70	250	25	70	1000	20	32	Yes	No	1	pumpout boat	
S	93	Glen Cove Marina	209	24	55	<i>150</i>	24	55	unk.	<i>some</i>	16	Yes	No	Not Operational		
O	94	Suisun City Marina	155	28	50	139	28	50	550	7	0	No	No	1		
L	95	Vallejo Marina	800	12	70	400	28	70	200	Few	40	Yes	No	2	Yes	
	96	Vallejo Yacht Club	134	20	44	120	24	44	0	Few	0	Yes	No	0		
S	97	Gilardi's Lakeville Marina	14	20	50	4	35	50	50	2	3	Yes	No	0		
O	98	Petaluma Marina	196	22	65	35	26	65	250	30	0	Yes	No	1		
N	99	Port of Sonoma Marina	282	20	40	30	30	40	Few	20	0	No	No	1		

\*\*These categories were not included in the survey, so answers only indicate facilities that volunteered information about these services; therefore it is likely that additional marinas on this list have some of these services.

	#	Facility	Sewage Pumpout Features				Estimated Sewage Pumpout Costs			Boat Launch	Launch Rate (boats/year)	Fuel Dock
			Date Installed	Pumpout Capacity	Usage (boats/month)	Depth (Feet)	Installation	Disposal & Treatment	Maintenance			
S	79	Bair Island Marina								No		No
A	80	Brisbane Marina	2001	Adequate	39	12	\$400 for replacement		\$100/yr	No		No
N	81	Coyote Point Marina	2003	Adequate	25	8	\$2000 (DBW grant)		\$100/yr	3	1000/yr	Yes
	82	Docktown Marina								1	unk.	No
M	83	Marine Collection LLC	Old	Adequate	unk.	6				1 (private)	Rarely	Yes
A	84	Oyster Cove Marina	1990	Adequate		16	\$5200 (no grant)		\$125/yr	No		No
T	85	Oyster Point Marina	1983	Adequate	108	8			\$100/yr	2	3,500/yr	Yes
E	86	Pete's Harbor								No		No
O	87	Pillar Point Harbor	Mid 1990's	Adequate	80	12	DBW grant		\$250/yr	6	10,000/yr	Yes
	88	Port of Redwood City Yacht Harbor	2003	Adequate	40	10	\$3,500 (DBW grant)		\$1,500/yr	1	2000/yr	No
S	89	South Bay Yacht Club								No		No
C	90	Vasona Lake								1	60/yr	No
	91	Velma Million Marina								1	1400/yr	No
	92	Benicia Marina	1980's	Insufficient	105	8		\$3/pumpout	\$150/month	1	3500/yr	Yes
S	93	Glen Cove Marina	Fairly New	Not Operational	N/A	10				No		No
O	94	Suisun City Marina	1994	Adequate	150	11			\$500-\$800/yr	3	unk.	unk.
L	95	Vallejo Marina	1990's & 1970's	Adequate	35	8		100/month	\$500/yr	4	6000/yr	Yes
	96	Vallejo Yacht Club								No		No
S	97	Gilardi's Lakeville Marina								1	20/yr	No
O	98	Petaluma Marina	1990's & 1970's	Adequate	8	4.5*			\$80/yr	1	250/yr	Yes
N	99	Port of Sonoma Marina	1980's	Adequate	2	5				No		Yes

	#	Facility	Date of Phone Survey	Survey Respondent	Title	Comments
S	79	Bair Island Marina	3/17/04	Teresa Holbrook	Marina Administrator	
A	80	Brisbane Marina	12/2/03	Ted Wolburton	Harbormaster	Marina plans to add 2nd pumpout in the next 12-18 months. Dump station is Sanisailor.
N	81	Coyote Point Marina	12/3/04	Chris Burgin	Park Ranger	Marina just installed a meter on the pumpout as a condition of the new grant.
	82	Docktown Marina	2/5/04	Paul Porri	Harbormaster	
M	83	Marine Collection LLC	2/5/04	Dave Kaiser	Attendant	
A	84	Oyster Cove Marina	12/3/03	Dick Timothy	Harbormaster	
T	85	Oyster Point Marina	12/3/03	Charles White	Asst. Harbormaster	
E	86	Pete's Harbor	2/5/04	Georgio Garilli	Harbormaster	MT Head contracts mandatory for live aboards.
O	87	Pillar Point Harbor	2/19/04	Dan Temko	Harbormaster	Mobile pumpout boat shared with Oyster Cove Marina (not used much).
	88	Port of Redwood City Yacht Harbor	12/4/03	Rich Ferrari	Harbormaster	
S	89	South Bay Yacht Club	3/16/04	Michael Barton	Port Captain	Yacht Club has applied for pumpout grant. Access to water is limited from silt.
C	90	Vasona Lake	2/26/04	Linda Hyman	Park Ranger	No power boats on lake. Rentals & small boat launch ramp. Open Easter-Labor Day.
	91	Velma Million Marina	3/15/04	Steve Bergkamp	Park Ranger	Berths for rentals. Lake used by SJSU Sailing Club. Small boats allowed on lake.
	92	Benicia Marina	1/16/04	Bruce Berkey	Harbormaster	Marina plans to add an additional pumpout facility.
S	93	Glen Cove Marina	12/4/03	Jody Fields	Harbormaster	20 berths & pumpout access lost in landslide 3 years ago.
O	94	Suisun City Marina	12/4/03	Gus Barkas	Marina Supervisor	
L	95	Vallejo Marina	1/22/04	Jim Haussener	Harbormaster	Plans to upgrade pumpout in the future. Mobile pumpout service also used by tenants.
	96	Vallejo Yacht Club	1/24/04	Maxx Williams	Manager	
S	97	Gilardi's Lakeville Marina	3/10/04	Russ Gilardi	Owner	
O	98	Petaluma Marina	1/16/04	Binky Thorsson	Harbormaster	* (plan to dredge pumpout area to 10)
N	99	Port of Sonoma Marina	2/2/04	Brian Swedberg	Harbormaster	